AFTER THE CRASH SILICON VALLEY WAS HUMBLED • BANKS WERE PUSHED TO THE BRINK • HOW TECH AND FINANCE CAN REBUILD

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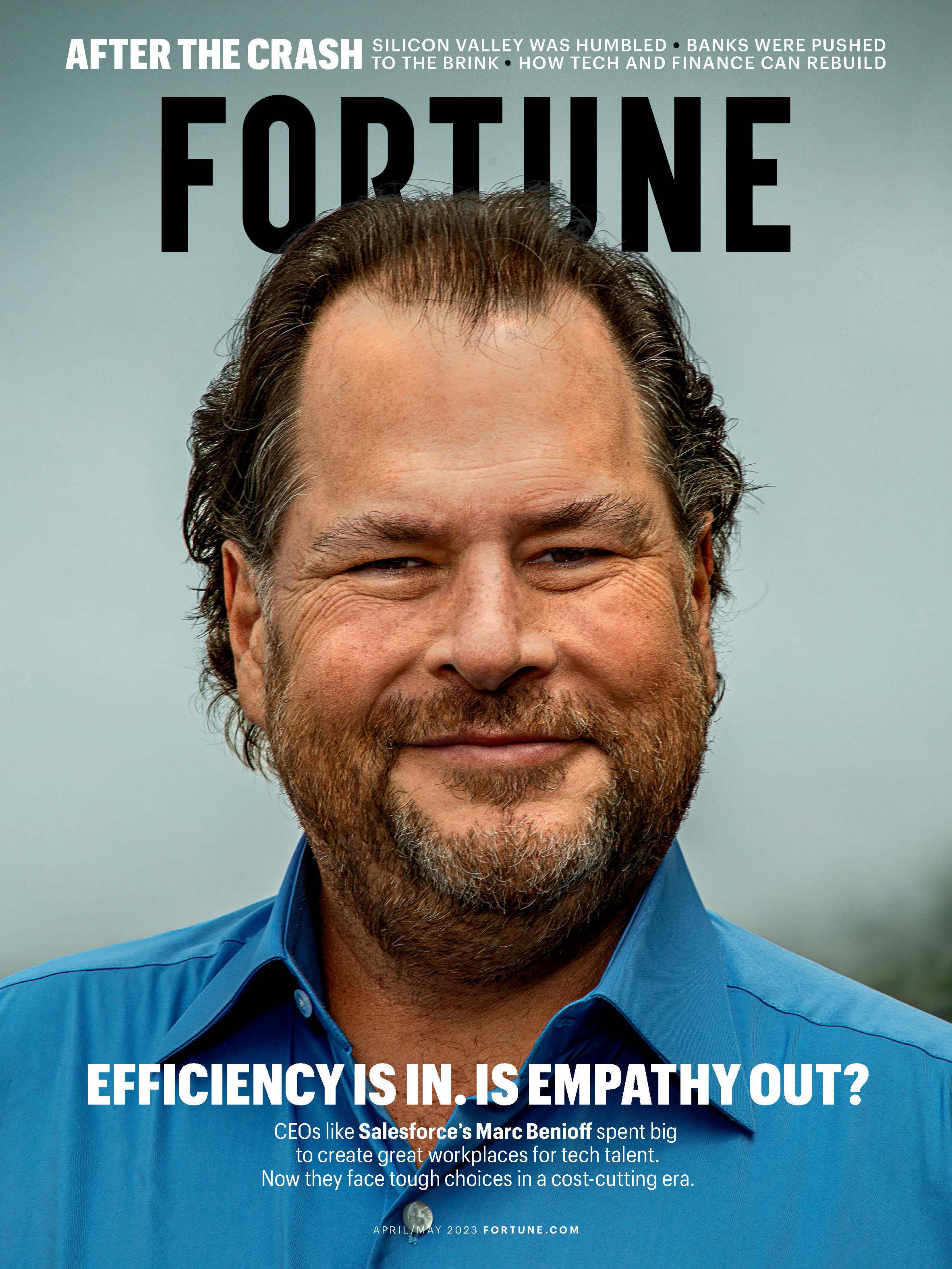

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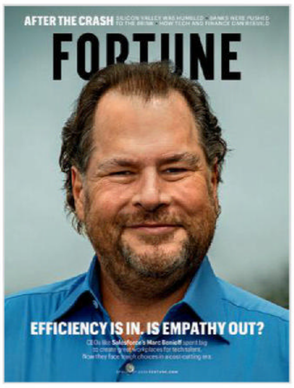

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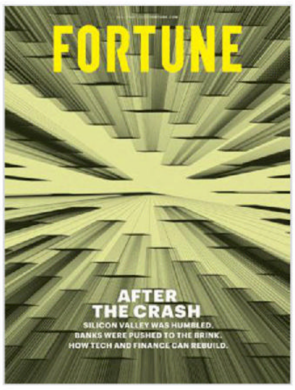
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AFTER THE CRASH
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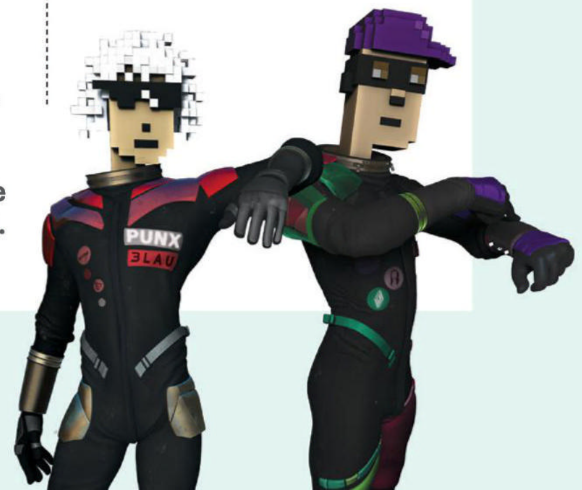

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The Most Powerful Women event convenes leaders of tomorrow's Fortune 500—both rising executives and innovators (May 16–17, San Diego).

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A HUB FOR SAUDI WOMEN ENTREPRENEURS

Entrepreneur, startup mentor, and photographer Maha Shirah never takes no for an answer. The founder of SheWorks, Saudi Arabia's first coworking space for women, Maha is helping female entrepreneurs seize new opportunities across the country's fast-developing economy

When Maha Shirah couldn't find a coworking space or networking hub in Riyadh that met the requirements of Saudi Arabia's fast-growing community of female entrepreneurs, she came up with a simple solution: She launched her own facility.

"Ten years ago, there were no female-friendly coworking spaces in Saudi Arabia," Maha says. "Things have changed now, but back then, women had to be segregated from men and nobody paid any attention to the question of daycare."

When Maha opened the SheWorks coworking hub in 2014, Riyadh had never seen anything like it. Gone were the leather sofas and dark colors that characterized other coworking centers. In their place were open spaces, big windows, designer furniture, and pastel colors, all intended to create a less oppressive atmosphere and to stimulate conversation, community, and creativity.

Just as importantly, SheWorks is located in a building with a late-closing daycare center on the first floor, so mothers can leave their children in a safe environment while they work on freelance projects and grow their startups.

> "ENTREPRENEURSHIP IS IN MY DNA. I ALWAYS WANT TO CHALLENGE CONVENTION AND DISCOVER NEW WAYS OF DOING THINGS."
>
> —
>
> **MAHA SHIRAH**, FOUNDER AND CEO, SHEWORKS

With its warm colors, open spaces, and contemporary designs, SheWorks breathed new life into the Riyadh coworking market.

▶▶ "A lot of women freelancers are working mothers, and we all face similar issues," Maha says. "SheWorks has built a real community of female entrepreneurs who want to help each other grow and develop."

With a successful side gig as a freelance photographer, Maha has always broken molds with her talent for improvisation and reinvention. "I was considered a rebel when I was young because I would always question why women couldn't do certain things," she recalls. "People thought I was crazy when I played football as a young girl, and they thought I was crazy for starting my own business in 2014. I will always challenge convention."

Maha's latest challenge is to transform SheWorks into an online business incubator for female entrepreneurs across the Middle East and beyond.

"I want to help connect entrepreneurs, investors, and venture capitalists and help bring female-led startups into Saudi Arabia," she explains. "We are an advanced economy that is full of opportunity for women entrepreneurs, wherever they are from. They just need the right connections and the right network. That is the SheWorks vision."

How is life changing for female entrepreneurs in Saudi Arabia?
In the last six or seven years, we have witnessed more changes than in the previous two decades combined. We are starting to see more and more women starting businesses. It is now much easier for women to become entrepreneurs. In 2016, the creation of the Small and Medium Enterprises General Authority, Monshaat, was a great help for new businesses. There are now more and more coworking spaces, business hubs, incubators, and accelerators.

What does Vision 2030 mean for female entrepreneurship in Saudi Arabia?
I am amazed by the passion for change that we are seeing in Saudi Arabia. People have a real ambition to drive the country toward the future. Actions speak louder than words and we are seeing real action. Saudi women and Saudi startups and entrepreneurs are developing new business partnerships and introducing new technologies and business models into the country.

This is a place bursting with opportunity for female entrepreneurs. There is a lot of emphasis on female empowerment and on supporting the role of women in building communities. As the SheWorks business model goes online, we want to help women enter the Saudi market and take advantage of all the changes and developments that are taking place.

What challenges have you faced as a businesswoman in Saudi Arabia?
People outside Saudi Arabia often have stereotyped ideas that we are oppressed, underdeveloped, or uneducated. In fact, we are a nation of technology lovers and we are one of the most literate countries in the region. I did not need permission from my husband or parents to start my business. People shouldn't judge a Saudi woman because she wears a hijab. At SheWorks, the women I have supported are aged up to 70. Saudi women are a very diverse and entrepreneurial community.

How have you helped Saudi women develop their businesses?
When we opened SheWorks in 2014, not many people understood the concept of a coworking space. We had to educate the market. But as more women became interested in finance and in entrepreneurship, they came to us for help in incubating and accelerating their businesses. Initially, most of our clients were women who had jobs but were developing their own projects after work. We allowed them to pay on a month-by-month basis to ease the financial burden on women who were still in the stage of proving their concept. We were more flexible and provided our clients with a wider range of business services than our competitors.

What inspires and motivates you as an entrepreneur?
I have tried working in different jobs, such as in banking, but I never found it challenging enough. The safe option is to find a steady job with a stable income; I need adventure and challenges. I like helping women and young entrepreneurs fulfill their potential. In art, in life, and in business, nothing goes according to plan and you will always find bumps in the road. Those obstacles can point the way to new opportunities.

Efficiency Is Cool Again

MACKENZIE STROH

ON MARCH 9, *Fortune* CEO Alan Murray and I hosted a lunch for 30 executives in Lake Nona, Fla. We asked for a show of hands: How many felt we'd soon enter a recession? Only a few did.

If we had asked the next day, they might have answered differently. During my short flight home, Silicon Valley Bank imploded: Depositors moved $42 billion out of its accounts in 24 hours, thanks in part to a VC-led Twitter frenzy. That weekend, SVB and another regional player, Signature Bank, collapsed. The biggest reason: They were caught flat-footed as interest rates swiftly jumped over the past year.

More than three years after COVID emerged, we are finally beginning to see the negative impact of our abnormal pandemic behavior on businesses. As I write this, the shakeout is sweeping through two of the most powerful industries, tech and finance. Meta, Amazon, Zoom, Salesforce, and Google all benefited from an artificial boost in spending as years of free government money sloshed around. They are now having to recalibrate, swapping exuberance for efficiency; collectively, the tech sector has laid off more than 150,000 staffers since the year began.

The spending also fueled high inflation, which Federal Reserve Chairman Jerome Powell has been trying to tame with rate hikes—which in turn are now crushing banks that were overexposed and under-regulated. It's making the rest of us nervously watch our accounts, wondering whether our money is safe.

When times are good, it's easy to think they will last. And that's when leaders can lose discipline.

Meta, for example, saw its stock drop more than two-thirds from its 2021 high, prodding CEO Mark Zuckerberg to declare 2023 "the Year of Efficiency"; he recently announced Meta's second round of layoffs in six months. Meta's shares have rebounded some. But as Geoff Colvin points out on page 48: "If this is the Year of Efficiency, what were all the previous years—the Years of Squandering?"

No industry has been humbled more than crypto, whose market cap has plummeted since the beginning of 2022. In our inaugural Crypto 40 package, editor Jeff John Roberts and his team picked the companies best positioned to survive and transform what remains of the industry. (Find the list on page 86.) One of those picks is Binance, which has been the cryptocurrency exchange leader in terms of trading volume. Jeff's team penalized it in our ranking, however, because its financials have been a black box.

Fortune's Shawn Tully spent months unearthing some surprising details about those financials (page 92). Binance's explosive growth in recent years, it turns out, has been aided by an exorbitantly expensive influencer marketing scheme. The rest of the industry needs to hope that Binance's founder, Changpeng Zhao, used the good times to prepare for a black swan. As we've seen with SVB and Binance's rival FTX, a loss of consumer confidence in the social media era can be swift, vast, and deadly.

It's not clear how far the current contagion will spread. But the lesson *is* clear: CEOs can't assume that their best days will become normal days. Crashes are unpredictable—and inevitable.

ALYSON SHONTELL
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BANK SHOT
Harris gained new prominence when New York seized Signature Bank as it collapsed.

In Focus

ADRIENNE HARRIS

When Harris took over the New York Department of Financial Services, she inherited an agency known for its groundbreaking crypto regulation. She oversaw crypto's meltdown with an even hand, cracking down on alleged bad actors while granting firms new licenses. It's all part of a complex juggling act: She must make sure her tactics—including recent actions to avert a banking crisis—also grow the state economy. BY **LEO SCHWARTZ**

> "That's the key with any sort of new innovation: How can you foster responsible, useful innovation and protect consumers and markets from bad actors?"
>
> **ADRIENNE HARRIS,**
> DFS SUPERINTENDENT

THE MONDAY MORNING after the third-largest bank failure in U.S. history, New York Gov. Kathy Hochul hosted a press briefing to talk down a nation on the edge. The bank, Signature, had a New York charter, but it wasn't Hochul who decided to seize control of the collapsing institution and hand it over to the FDIC, capping the most turbulent financial weekend since 2008. After a brief introduction, Hochul ceded the stage to the woman who had choreographed the takeover: Adrienne Harris, superintendent of the New York Department of Financial Services.

With an understated assurance, Harris stood at the podium, describing how her team had worked with the federal government to avert disaster. "The banks are open and ready for business this morning," she said with the hint of a smile.

The New York DFS is an unusually powerful regulator, not only because of its seat in the financial capital of the world, but also because of its broad portfolio that stretches from banking and insurance to student loan providers. In recent years, though, the department's oversight of the roller-coaster crypto industry has put it under a spotlight and a magnifying glass, even more so than federal counterparts like the U.S. Securities and Exchange Commission.

Unlike its D.C. peers, DFS has an added objective: Explicit in the department's mission is not just regulation but economic growth. For Harris, who arrived with an imposing résumé of governmental and corporate experience, the twin imperatives have meant sustaining the state's nation-leading approach to nurturing the crypto industry while making sure the state doesn't open its doors to the next Sam Bankman-Fried.

"That's the key with any sort of new innovation, is how can you foster responsible, useful innovation and protect consumers and markets from bad actors," Harris told *Fortune* over a video interview. "You have troubling times, and it's not an easy thing to do as a policymaker, but that's the job."

The power of Harris and her DFS

VICTOR LLORENTE

is rooted in the department's groundbreaking approach to crypto regulation, which it established through its BitLicense virtual currency program in 2015. The BitLicense, devised by then-superintendent Benjamin Lawsky, established New York as the first state to create a regulatory framework around crypto—a pioneering move that, along with its willingness to grant trust charters, attracted top firms. A trust charter—a step higher than a BitLicense—grants firms fiduciary authority.

Andrew Chang, the former COO of the digital assets firm Paxos, says that his company decided to move from Singapore to New York because of Lawsky's welcoming stance. In 2015, Paxos became the first company to receive a trust charter for digital assets. "It was crazy to think that, for his credit, he saw [crypto] was going to be a thing," Chang says. "Let's regulate it from the beginning."

The dual offerings of BitLicenses and trust charters allowed crypto companies to conduct business in New York, from issuing stablecoins to holding virtual currencies like Bitcoin and Ether for customers. Meanwhile, federal regulators failed to establish any rules for the industry as Congress struggled to pass legislation—a vacuum that still exists. "When [DFS] says to come in and have a conversation, they're actually doing that, as opposed to what we're seeing at the federal level," said Kara Calvert, the head of U.S. policy at Coinbase, an early BitLicense recipient.

FACING CRYPTO'S WRATH

Harris took over as superintendent in January 2022, becoming the first Black woman to lead the department. At the time, she was teaching as a professor at the University of Michigan's public policy center, as well as serving as a senior advisor at the corporate advisory Brunswick Group.

She had spent the bulk of her career in public service, including stints in the Treasury Department and the Obama administration, where she managed the financial services portfolio and led an interagency task force on distributed ledger technology and crypto.

Still, as Harris began at DFS, progressives worried that she would be too deferential to corporate interests. Before stepping into government, Harris was also an associate at Sullivan & Cromwell, the law firm currently unraveling FTX's bankruptcy. After she left the Obama administration, she dived into the corporate world. Financial disclosure forms from 2021 reviewed by *Fortune* reveal that Harris sat on the board of directors for 10 companies and nonprofits, including the controversial loan platform LendingClub and the real estate startup Homie. She was an advisor to 11 others, many of them in the financial technology space, including the payday loan app Brigit.

Michele Gilliam, the political director at the progressive nonprofit Action Center on Race and the Economy, challenged Hochul's DFS nomination of Harris in a January 2022 op-ed for the *New York Daily News,* describing Harris as a "fintech booster" and citing her work with Brigit, LendingClub, and Homie. In an interview with *Fortune,* Gilliam said the past year has confirmed her fears about Harris, especially as the Hochul administration feuds with labor organizations. "It certainly hasn't changed," Gilliam said. "She's still been very influenced by corporate lobbyists." (Harris declined to comment.)

During Harris's brief tenure at the helm, the DFS has been assertive in managing its broad portfolio, bringing enforcement actions against life insurance companies and issuing guidance on how banks should approach the risks posed by climate change. She has demonstrated a particularly measured approach to the crypto portfolio she inherited, even before the market's precipitous collapse last year.

Among crypto industry insiders, there is constant criticism of DFS's slow and laborious process of issuing BitLicenses. Thirty-three digital asset companies have a BitLicense or trust charter—FTX.US applied for a trust charter in May 2022 but was never approved—and only six companies have been granted a BitLicense since Harris was sworn in.

One New York–based crypto startup founder, who spoke on the condition of anonymity to not imperil their standing with DFS, told *Fortune* that they couldn't wait around for three years for approval, burning runway capital on legal fees as department staff pored over its financial records and business plan for potential risks. Instead of applying in New York, they are exploring offshore options, including in the Cayman Islands.

> "When [DFS] says to come in and have a conversation, they're actually doing that, as opposed to what we're seeing at the federal level."
>
> **KARA CALVERT,** COINBASE HEAD OF U.S. POLICY

> "If you're a crypto innovator and you want to be regulated—you want this halo that comes with being regulated—you don't have a lot of options. New York is still the best option."
>
> **MATTHEW HOMER,** FORMER DFS DEPUTY SUPERINTENDENT FOCUSED ON DIGITAL ASSETS

Harris says her growing crypto team, bolstered by new virtual currency oversight funding granted by last year's state budget, is evidence that the process is improving. When she arrived, she says, the crypto team was skeletal; now it has over 50 people. Even so, Harris cautions, "Speed is not the metric," adding, "It doesn't mean we shouldn't be efficient."

Her approach to crypto enforcement actions has been more aggressive, especially in the months following November's implosion of FTX. With the fall of Bankman-Fried's empire, all eyes turned to Binance, the stateless exchange with a reputation for rule-skirting. Although Binance did not have a BitLicense, it did have a foothold in New York through a partnership with Paxos, which issued a Binance-branded stablecoin called BUSD that had grown to a market cap of over $20 billion. After reports that Binance was using customer collateral associated with the stablecoin for its own purposes—a disquieting echo of FTX—the DFS acted, ordering Paxos to end its partnership with Binance and cease issuing the token. Changpeng Zhao, Binance's cofounder and CEO, tweeted that given the "regulatory uncertainty in certain markets," Binance would begin reviewing its other projects.

Many in the crypto industry criticized Harris's heavy-handedness towards Paxos since it had previously earned DFS approval to issue BUSD. She defends the action: "We were taking responsible decisions with the stability of the market in mind."

STOKING THE ECONOMY

Still, the remit of the DFS is not just stability but driving growth. "If there's going to be a crypto company X that exists, then you want to be the one to regulate it and have them in your state, because you have that economic development mandate," says Matthew Homer, a former DFS deputy superintendent focused on digital assets. He added that BitLicenses and New York trust charters have grown even more valuable as Congress continues to drag its feet on crypto legislation.

For Harris, it has become increasingly difficult to balance the DFS's priorities as crypto firms buckle and lash out. Her decision in mid-March to take over Signature was a flashpoint. The bank, which catered to entrepreneurs in crypto, real estate, and a variety of small businesses, was destabilized by a run of withdrawals by depositors. But many crypto leaders saw DFS's action as an attack on their industry, with some voicing their intention to leave New York, despite Harris's denials that the seizure was related to the bank's crypto business.

"Regardless of what DFS's intentions were, it was taken extremely negatively by the crypto community, and it will negatively impact trust in the DFS long-term," Austin Campbell, the former chief risk officer at Paxos and an adjunct professor at Columbia Business School, told *Fortune* at the time.

The move demonstrates Harris's willingness to wade into contentious arenas, all while elevating her home state's standing. In December, she was appointed the banking representative for all states on the powerful Financial Stability Oversight Council, a federal organization created by the landmark Dodd-Frank banking legislation that includes such illustrious figures as the Treasury secretary, the Federal Reserve chair, and the SEC chair. "We are at the table all the time," she told *Fortune.*

Harris's takeover of Signature was a display of New York's financial might, thrusting the DFS into the center of the banking crisis and opening Harris to wider scrutiny. At press time, details continued to emerge about the perilous weekend that spurred her into action. Harris has defended the seizure even under fire from one of Dodd-Frank's architects, former congressman turned Signature board member Barney Frank, who argued that the bank could have survived on its own.

Homer says that fielding such criticism is part of Harris's job. In his view, New York's status isn't in jeopardy. He pointed to a recent BitLicense granted to the social investment platform eToro in February as evidence that New York is still spurring responsible innovation, as federal regulators continue to battle over jurisdiction.

"If you're a crypto innovator and you want to be regulated—you want this halo that comes with being regulated—you don't have a lot of options," Homer said. "New York is still the best option."

Powering the Internet and Prioritizing People

Technology leader **Cisco** is committed to listening to employees, understanding their needs, and constantly adapting to meet them where they are.

VOLUNTEERS FROM CISCO'S REAL-TIME TRANSPORT PROTOCOL (RTP) TEAM POSE TOGETHER AT A SALVATION ARMY TOY SHOP AFTER SORTING TOYS FOR MORE THAN 600 CHILDREN IN NEED.

WHAT HAPPENS TO A COMPANY'S CULTURE when most employees are remote or only in the office part-time? For many hybrid and remote-first businesses, it can be a challenge to foster the unique atmosphere critical to company cohesion.

But leave it to Cisco, the worldwide technology leader that powers the internet, to get the job done. As a provider of the networking, collaboration, and security technologies making the remote revolution possible, the San Jose–based corporation, which has 83,000 employees in 95 countries, was a pioneer in remote work long before the pandemic. Cisco's "Conscious Culture," in which employees feel seen, heard, and valued, permeates every aspect of the company. This culture has a significant impact on revenue, market performance, and attracting and retaining top talent.

"The Conscious Culture we cultivate sets standards and expectations for how we collaborate with, support, and empower one another, and it makes Cisco a place where people are proud to work," says Fran Katsoudas, executive vice president and chief people, policy, and purpose officer at Cisco. "We know that when we create a supportive environment for our people, they in turn support our business, and our company wins."

Cisco took action during the pandemic to better support its people and respond to crises. As lines blurred between the responsibilities of work and home life for many employees, the organization introduced several changes to assure the well-being of its workforce, such as increasing the amount of emergency/critical time off for caregivers (who reported higher rates of burnout than non-caregivers, according to internal Cisco research). It also doubled the amount of time employees can devote to volunteering, added a mental health practitioner to every all-company call, and introduced quarterly companywide "Days for Me," where the entire staff takes the day off to recharge.

"We've learned that caring for our people and their families is fundamental to our success," says Katsoudas. "We must let our purpose to power an inclusive future for all guide us as we take a stand for what's right through steadfast and decisive leadership. Our employees, customers, partners, and the public increasingly turn to us to speak up, speak out, and take action to positively impact the lives of people everywhere." ■

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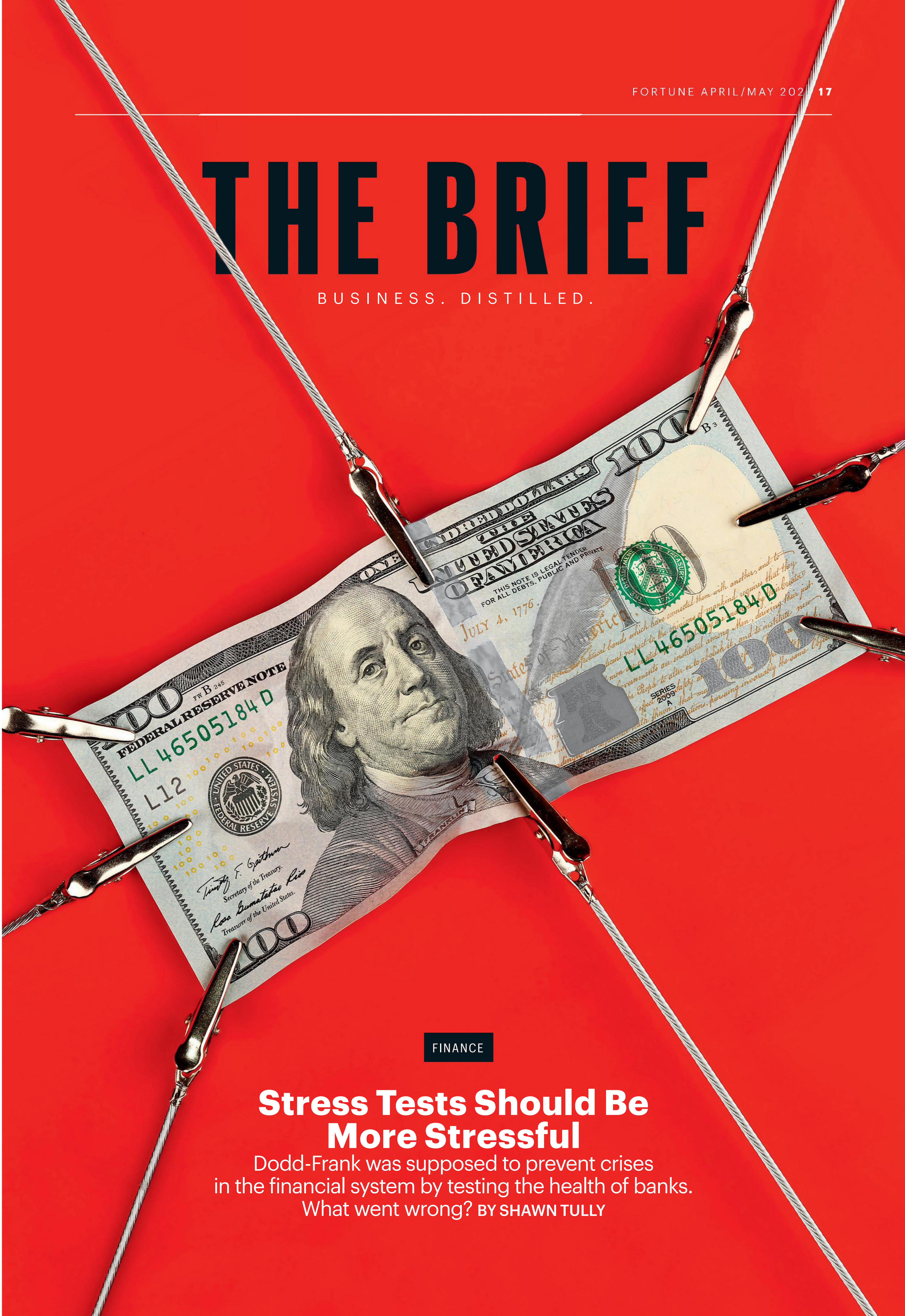
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FINANCE

Stress Tests Should Be More Stressful

Dodd-Frank was supposed to prevent crises in the financial system by testing the health of banks. What went wrong? **BY SHAWN TULLY**

Amid the chaos in the wake of Silicon Valley Bank's failure, which sowed panic and threatened a global banking crisis, one fair question was: Weren't those famous "stress tests" established by the Dodd-Frank Act supposed to prevent this?

Indeed, the Dodd-Frank Wall Street Reform and Consumer Protection Act was designed to envisage all kinds of "severely adverse" scenarios. Some have pointed out that the legislation—sponsored by Sen. Christopher J. Dodd and Rep. Barney Frank in 2010 to prevent a meltdown like that of 2007–08—was significantly weakened by rollbacks during the Trump administration.

That's true, but it's also worth noting that the models in the original legislation totally failed to predict the storm that stirred the current crisis: a historic leap in interest rates.

"In the stress tests, the Fed thought the problem would be falling GDP, defaults on commercial real estate loans, a spike in unemployment," Thomas Hogan, a senior fellow at the American Institute for Economic Research, told me. "Instead we got the opposite of that: a good economy, low joblessness, and few defaults. The things the Fed thought would be a problem are good now. And the thing they deemed not to be important, the risk of a big rise in rates, is causing the failures in the financial system."

FOLLOWING THE Great Financial Crisis, the Fed began imposing annual stress tests—which assessed banks' future capital and profitability under various crisis scenarios—but only for the largest institutions. Starting in 2013, Dodd-Frank mandated exams for a far broader universe, all lenders holding $50 billion or more in assets.

For the next several years, the banks over that $50 billion threshold underwent extremely demanding tests. Guided by Dodd-Frank, the Fed pushed the banks to double their equity capital in an effort that has enormously bolstered lenders' strength for withstanding hard times.

But the smaller regional banks lobbied for lighter treatment. They argued the tests imposed a much bigger strain on their money and manpower than for the biggest banks. The Trump administration, then in full deregulatory mode, championed a law called the Economic Growth, Regulatory Relief, and Consumer Protection Act that in 2018 won bipartisan passage in Congress. The act raised the starting point for Fed stress tests from $50 billion to $100 billion. It also established different standards for two different classes of major banks: those with assets of $100 billion to $250 billion—the midsize players—and the whales at $250 billion and up.

The new measure effectively freed the regionals from some of the toughest Dodd-Frank requirements and gave the Fed wide latitude in setting the requirements. Whereas the biggest banks are still stress-checked annually, the $100 billion to $250 billion group moved to a biennial cycle. What's more, even when a lender reaches the $100 billion mark, there's a several-year process before banks are subjected to official tests. Silicon Valley Bank, which held over $200 billion at the end of 2022, didn't hit the $100 billion mark in average assets until the end of 2021, and therefore wasn't included in the 2022 test. In other words: At the time of its collapse, it had never endured a Fed exam. (Signature Bank, which also collapsed in March, wasn't big enough to qualify for the 2022 stress tests.)

"Rolling back the requirements in 2018 was a mistake," Todd Phillips, a regulatory consultant and former FDIC official, told me. "You had Congress and regulators saying, 'Don't be aggressive on banks this size.' Now, we're seeing the results."

THERE WERE also problems with the models that Dodd-Frank uses to predict risks when it devises its stress tests—and here, the Fed, not Congress, seems to have dropped the ball. In February 2022 the Fed disclosed the full array of banks to be tested for the year, and what it considered the worst possible economic scenarios.

The Fed provided two sets of forecasts and playbooks: “baseline” and “severely adverse.” The Fed got the baseline scenario pretty much right in predicting a healthy economy with robust GDP growth and low unemployment. But it was spectacularly wrong on two things: inflation and interest rates.

Somehow, the Fed’s model had inflation dropping to 2.3% in Q1 of 2023, and going a touch lower by early 2025. It predicted that the three-month Treasury would be yielding 0.9%. The real numbers: Inflation hit 6% in February, after rising 6.5% in 2022. The three-month Treasury is paying 4.4%—over four times the Fed’s baseline.

In the “severely adverse” scenario, the Fed saw the direst outlook as a confluence of a deep global recession, “amplified by a prolonged continuation of remote work” that would lead to a meltdown in commercial real estate, coupled with bad times in the stock market. In this scenario, inflation and interest rates would go practically dormant! Falling GDP and dour investor spirits would lower the consumer price index trajectory to 1.4% by Q1 of 2023, and it would stay sub-2% all the way into 2025. As for the three-month Treasury, the Fed projected it would be stuck at a minuscule 0.1% right now: one-fortieth of the actual number.

This was a grave error, Douglas Diamond, professor at the University of Chicago’s Booth School of Business and 2022 Nobel Prize winner in economics, told me: “They should have been testing up to 7% rates.”

The Fed announced in June that, based on these predictions, all the banks surveyed passed the stress tests. These good grades made the banks look a lot safer than they really were.

SO, WHAT will it take to restore confidence?

“The Fed and FDIC brought out all the bazookas in guaranteeing all deposits at SVB and Signature Bank, and [in] opening the Fed’s discount window to the banks,” said Phillips. “Where we go from here will be more about stiffening regulations.”

PROBLEMS WITH THE FED’S STRESS TESTS MADE BANKS LOOK SAFER THAN THEY WERE.

The good news is the 2018 rollback can itself be rolled back relatively easily. The Trump law granted the Fed, FDIC, and Office of the Comptroller of the Currency the right to reverse the breaks for midsize banks if they find it necessary. No new legislation is required. The authorities could also independently shorten the stress-test cycle for regionals, among other measures.

The upshot: We’ll likely see a raft of reforms forcing big regionals to hold much more liquid capital. Getting there could drive them to raise equity, diluting shareholders and pounding their stock prices. The higher capital requirements would also restrict the share of their funding that they can lend to customers, tightening credit and heightening the chances of a deep recession.

Of course, the Fed is constantly running sophisticated internal tests on how scenarios differ from the baseline. The central bank knows precisely how much a given jump in rates will lower liquidity and regulatory capital. It just didn’t see what actually happened as at all likely. Stress tests should include “worst-case” rate shock assumptions to restore the balance and credibility that the exercise has lost.

Questions remain about whether the Fed and the banks can update their risk models to reflect the challenges and nuances of a digital era. SVB swelled so quickly because it catered to one of the most volatile, then-booming niches of the economy. And it collapsed quickly because social media spread word of its troubles at lightning speed. As so often happens in finance, something that was unforeseeable is now reality. Now the burden is on the cops to catch up—and fast.

1.4%

▲ **THE FED’S PREDICTED INFLATION FOR Q1 OF 2023 IN ITS ‘SEVERELY ADVERSE’ STRESS TESTS SCENARIO**

6%

▲ **ACTUAL INFLATION RATE IN FEBRUARY 2023**

0

▲ **NUMBER OF FED STRESS TESTS SILICON VALLEY BANK HAD GONE THROUGH WHEN IT COLLAPSED IN MARCH**

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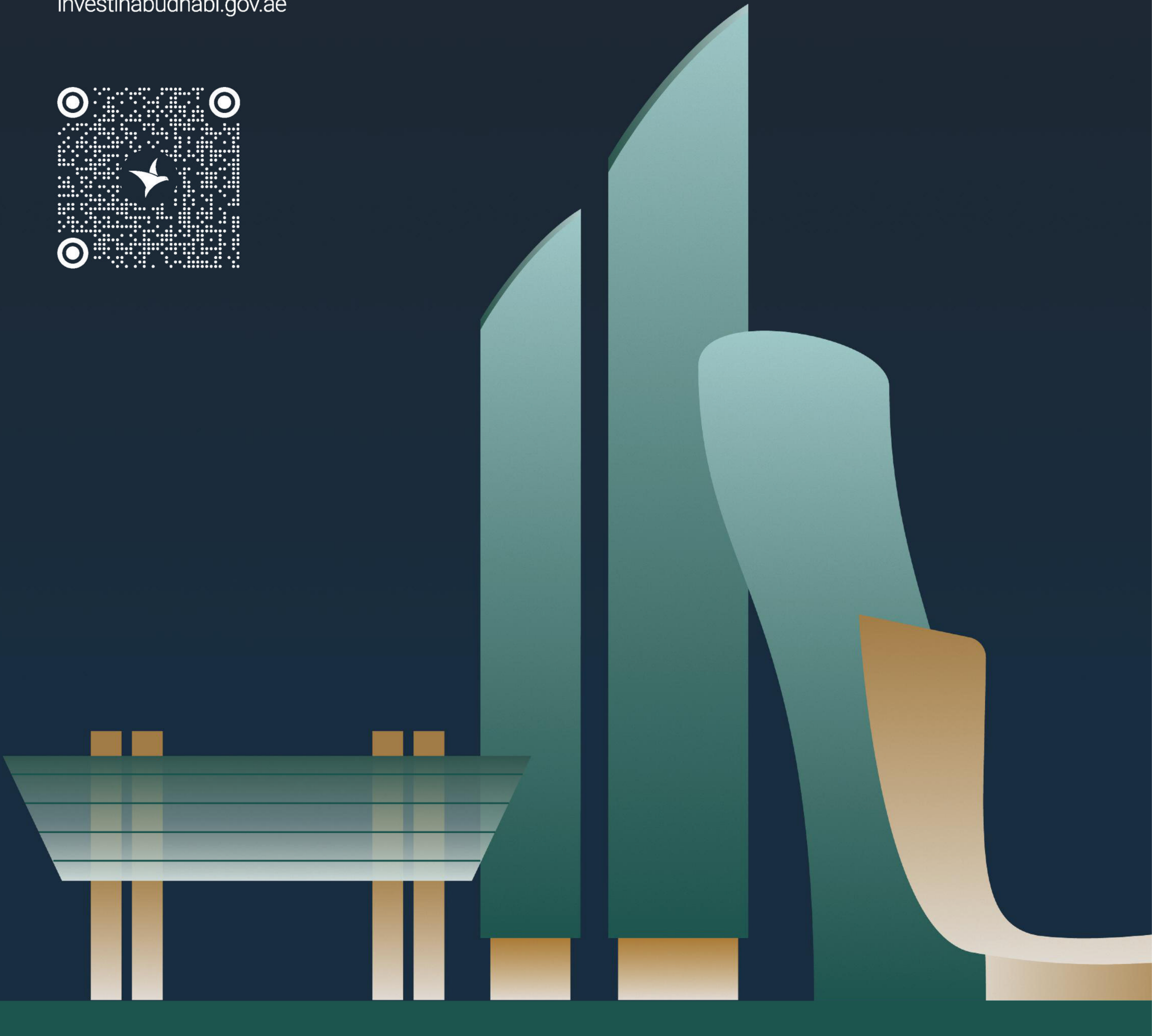

TECH

Fake News 2.0: The Election Threat from A.I.

Social media has wreaked havoc. Are we ready for generative A.I.?

BY JEREMY KAHN

VOTE
ElectionSource

▲ A.I. tools are expected to turbocharge the misinformation aimed at voters—and maybe help combat it.

SCOTTY PERRY—BLOOMBERG/GETTY IMAGES

ON FEB. 27, the eve of Chicago's mayoral election, a Twitter account calling itself Chicago Lakefront News posted an image of candidate Paul Vallas, a former city budget director and school district chief who was in a tight four-way contest for the city's top job, along with an audio recording. On the soundtrack, Vallas seems to downplay police shootings, saying that "in my day" a cop could kill as many as 18 civilians in his career and "no one would bat an eye." The audio continues, "This 'Defund the Police' rhetoric is going to cause unrest and lawlessness in the city of Chicago. We need to stop defunding the police and start refunding them."

As it turned out, Vallas said none of those things. The audio was quickly debunked as a fake, likely created with easily accessible artificial intelligence software that clones voices. The Chicago Lakefront News account, which had been set up just days before the video was posted, quickly deleted the post—but not before the tweet had been seen by thousands and widely recirculated, with some apparently tricked into believing the "recording" was authentic. The audio had little impact on the mayoral race: Vallas won a plurality and was headed toward a runoff election at press time. But the Vallas voice clone is a scary preview of the sort of misinformation experts say we should expect to face in the 2024 U.S. presidential election, thanks to rapid advances in A.I. capabilities.

These new A.I. systems are collectively referred to as "generative A.I." ChatGPT, the popular text-based tool that spits out student term papers and business emails with a few prompts, is just one example of the technology. A company called ElevenLabs has released software that can clone voices from a sample just a few seconds long, and anyone can now order up photorealistic still images using software such as OpenAI's DALL-E 2, Stable Diffusion, or Midjourney. While the ability to create video from a text prompt is more nascent—New York–based startup Runway has created software that produces clips a few seconds in length—a scammer skilled in deepfake techniques can create fake videos good enough to fool many people.

"We should be scared shitless," says Gary Marcus, professor emeritus of cognitive science at New York University and an A.I. expert who has been trying to raise the alarm about the dangers posed to democracy by the large language models underpinning the tech. While people can already write and distribute misinformation (as we've seen with social media in past elections), it is the ability to do so at unprecedented volume and speed—and the fact that non-native speakers can now craft fluent prose in most languages with a few keystrokes—that makes the new technology such a threat. “It is hard to see how A.I.-generated misinformation will not become a major force in the next election,” he says.

The new A.I. tools, Marcus says, are particularly useful for a nation-state, such as Russia, where the goal of propaganda is less about persuasion than simply overwhelming a target audience with an avalanche of lies and half-truths. A Rand Corporation study dubbed this tactic “the firehose of falsehood.” The objective, it concluded, was to sow confusion and destroy trust, making people more likely to believe information shared by social connections than by experts.

Not everyone is sure the situation is as dire as Marcus suggests—at least not yet. Chris Meserole, a fellow at the Brookings Institution who specializes in the impact of A.I. and emerging technologies, says recent presidential elections have already witnessed such high levels of human-written misinformation that he isn’t sure that the new A.I. language models will make a noticeable difference. “I don’t think this will completely change the game and 2024 will look significantly different than 2020 or 2016,” he says.

Meserole also doesn’t think video deepfake technology is good enough yet to play a big role in 2024 (though he says that could change in 2028). What does worry Meserole today is voice clones. He could easily imagine an audio clip surfacing at a key moment in an election, purporting to be a recording of a candidate saying something scandalous in a private meeting. Those present in the meeting might deny the clip’s veracity, but it would be difficult for anyone to know for sure.

Studies have come to conflicting conclusions on whether false narratives persuade anyone or only reinforce existing beliefs, says Sandra Wachter, a professor of technology and regulation at the Oxford Internet Institute. But in a close election, even such marginal effects could be decisive.

Faced with the threat of machine-generated fake news, some believe A.I. may itself offer the best defense. In Spain, a company called Newtral that specializes in fact-checking claims made by politicians is experimenting with large language models similar to those that power ChatGPT. While these models can’t actually verify facts, they can make humans better at debunking lies, says Newtral chief technology officer Ruben Miguez Perez. The technology can flag when a piece of content is making a factual claim worth checking, and it can detect other content promoting the same narrative, a process called “claim matching.” By pairing large language models with other machine learning software, Miguez Perez says it’s also possible to assess the likelihood of something being misinformation based on the sentiments expressed in the content. Using these methods, Newtral has cut the time it takes to identify statements worth fact-checking by 70% to 80%, he says.

The large social media platforms, such as Meta and Google’s YouTube, have been working on A.I. systems that do similar things. In the run-up to the 2020 U.S. presidential election, Facebook parent company Meta says it displayed warnings on more than 180 million pieces of content that were debunked by third-party fact-checkers. Still, plenty of misinformation slips through. Memes, which rely on both images and text to convey a point, are particularly tricky for A.I. models to catch. And while Meta says its systems have only gotten better since the 2020 election, the people promoting false narratives are continually devising new variations that A.I. models haven’t seen before.

What might make some difference, Marcus says, is sensible regulation: Those creating large language models should be required to create “digital watermarks” that make it easier for other algorithms to identify A.I.-created content. OpenAI, ChatGPT’s creator, has talked about this kind of watermarking, but has yet to implement it. Meanwhile, it has released free A.I.-content detection software, but it works only in about a third of cases. Marcus also says Congress should make it illegal to manufacture and distribute misinformation at scale. While First Amendment advocates might object, he says the framers of the Constitution never imagined technology that could produce infinite reams of convincing lies at the press of a button.

Then again, the late 18th century, when the U.S. was founded, was a golden era of misinformation as well, with anonymous pamphlets and partisan newspapers peddling scurrilous tales about opposing politicians and parties. Democracy survived then, notes Oxford’s Wachter. So perhaps it will this time too. But it could be a campaign unlike any we’ve ever witnessed before.

> **“IT’S HARD TO SEE HOW A.I. MISINFORMATION WON’T BE A FORCE IN THE NEXT ELECTION.”**
>
> **GARY MARCUS,** PROFESSOR EMERITUS, NEW YORK UNIVERSITY

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Univar Solutions' evolution was fueled by its relentless focus on innovation, steady improvement, and its long-standing commitment to making industries safer and more sustainable. At the heart of its strategy has been a digital transformation, which allows the company to increase efficiency, enhance collaboration, and synergize efforts across all parts of the organization. Ultimately, these advanced digital tools are helping Univar Solutions become faster and more agile at meeting increasing demands and emerging trends to better serve its customers and suppliers.

"We're always looking deeper, keeping a close eye on market trends, and examining all our products, processes, and operations to find ways to do things better," says Jukes. "Continuous innovation is a mindset that requires intentionality, creativity, and a capacity for risk."

Sustainability has become a key innovation driver for the chemical and ingredient industry. Univar Solutions is using its expertise, deep industry knowledge, and technical capabilities to develop greener products and a new generation of higher-quality nature-based, sustainable solutions. This dedication to innovation reflects Univar Solutions' commitment to solving its customers' most pressing issues now and in the future.

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TECH

China's Tesla Takes On the World

BYD is rapidly expanding outside its home country to challenge established auto giants. **BY VIVIENNE WALT**

BY HIS OWN admission, the car salesperson in Stockholm knew nothing about BYD last September, when his boss offered him a chance to work in the new showroom of China's biggest electric-car company. "I was like, 'BYD? Never heard of it,'" says Benhur Hiyabu, standing inside the showroom on a snowy March morning. After selling Subarus for years, Hiyabu decided he had little to lose: "I thought, 'Okay, I'm going to try something new,'" he says.

BYD is betting that customers in Europe, the Americas, and across Asia will also try something new, especially if the price is right. More than 20 years after inaugurating its first auto plant in Shenzhen, BYD—or Build Your Dreams, to use its fanciful full name—is pushing to expand passenger car sales beyond its comfort zone in China. Over the past year, the company has spent huge amounts of money opening showrooms in major cities worldwide, establishing offices in key countries, and setting up a complex system to ship its relatively low-cost electric cars overseas. If successful, BYD would become the first Chinese global automotive giant.

But the ambitious plan comes with major challenges. To make inroads, BYD must chip away at the established automaking Goliaths that already dominate the world's fast-growing electric car market. Chief among those rivals, of course, is Tesla, which has nearly ubiquitous consumer name recognition and a long track record. BYD must somehow get the attention of car buyers and then prove that its models are good enough.

Europe is a key battleground in this new war. Last fall, BYD opened its doors in six European countries, encroaching on some of Tesla's stronghold markets, as well as those of far better-known players like Volkswagen and Stellantis (maker of Chrysler, Jeep, and Peugeot)—all of which are fiercely competing in the EV revolution.

For automakers, this is a high-stakes fight, in the biggest energy transition in a century. EVs represented one in seven new cars sold globally in 2022, up from one in 70 just five years earlier. The blazing acceleration looks set to continue.

The question is: Which companies will seize the momentum? In the minds of some experts—and even auto execs—BYD seems better placed than most. That's because it started in 1995 by producing batteries, the most valuable component in EVs. China controls more than 70% of the world's battery supply, giving its auto industry a crucial edge over Western competitors.

In 2010, BYD debuted China's first pure-electric

A BYD electric sedan inside a Shanghai showroom.

LOVE
CHINO
海豹

VCG/GETTY IMAGES

cars, and it quickly became a thriving business. Last year, the company sold more than 911,000 pure-electric cars plus another 946,000 hybrids. Almost all of those sales were in China. But the company's new overseas business is growing rapidly. In February, BYD sold 15,002 cars outside China—more than triple the number in July, the first month it reported those figures.

Matthias Schmidt, an auto industry analyst in Berlin, says China has an advantage over Western countries because it already has a strong domestic EV market. Its strategy is to use that momentum and know-how to expand globally. "They are one step ahead of legacy makers," he says.

Western automakers sound increasingly nervous, with some blaming Europe's relatively low import tariffs compared with China's high tariffs for foreign companies. "It's a very bleak scenario," Stellantis CEO Carlos Tavares told German auto publication *Automobilwoche* in January. Without EU action, he said, "there will be a terrible fight." Tesla CEO Elon Musk, who produces more Teslas in Shanghai than anywhere else, told investors in January that Chinese automakers were his fiercest rivals. "They work the hardest, and they work the smartest," he said.

That much has long been clear in the Stockholm headquarters of Einride, a freight transportation startup. Last year, Einride agreed to buy about 200 BYD electric trucks and vans. Einride, which embeds its software into electric vehicles and runs trucking operations for clients like General Electric, already has BYDs on the road in the U.S. Now it is negotiating to buy over 1,000 more of BYD's vehicles for its U.S. business, says Niklas Reinedahl, Einride's regional general manager.

When asked why the company passed on buying vehicles from a U.S. company such as Freightliner Trucks, he says BYD has unbeatable advantages. "They've been building battery technologies for a number of years," Reinedahl notes. "They have been through teething problems."

With passenger electric cars, BYD may convert even more buyers as EVs go more mass-market. "Chinese quality has risen beyond anyone's expectations," industry analyst Schmidt says. Perhaps in response to the growing challenge from BYD and other Chinese competitors, Musk has cut Tesla prices in recent months.

Yet in BYD's Stockholm showroom, all three floor models remain priced below the equivalent Teslas. BYD's Atto 3 crossover, for example, costs 520,000 Swedish kronor (about $49,380) versus 610,000 kronor (about $57,925) for a comparable Tesla Model 3.

So far, BYD's business in Stockholm seems to be going well. Within two months of opening in October, the store sold more than 1,000 cars—"a flying start," says Magnus Matsson, spokesman for BYD's sole Swedish distributor, Hedin Bil. "There's a strong demand for smaller, less expensive EVs," he says.

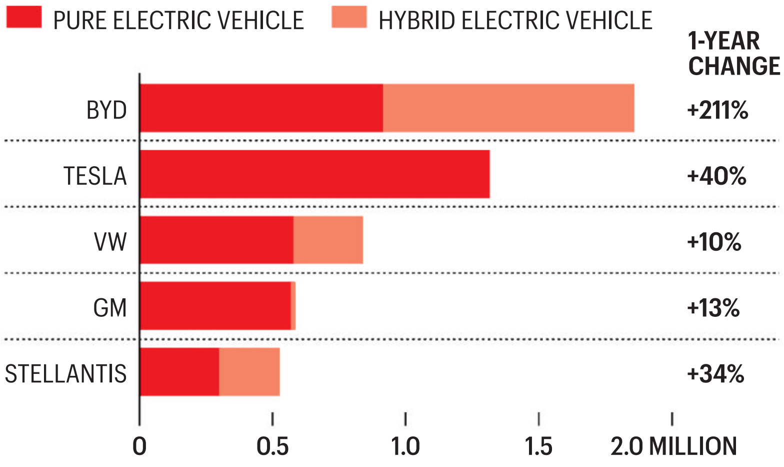
However, there is stiff competition. A few doors down is the showroom of Guangzhou EV maker XPeng, which opened early last year. On one recent morning, three customers crowded around two models on display. And a little farther away is Tesla's store. There, in a deserted space with no staff, a Model 3 and Model S sit, while a sign tells shoppers to "schedule a test-drive by scanning the QR code."

BYD's sales in Sweden remain below those of Volvo, Volkswagen, Tesla, and others. But BYD salesperson Hiyabu says customer attitudes are changing fast: "They see the price, and that it's Chinese. They expect it to be a little junky." Then, after test-driving the vehicles, he says, "it feels like a good car."

ELECTRIC LANDSCAPE

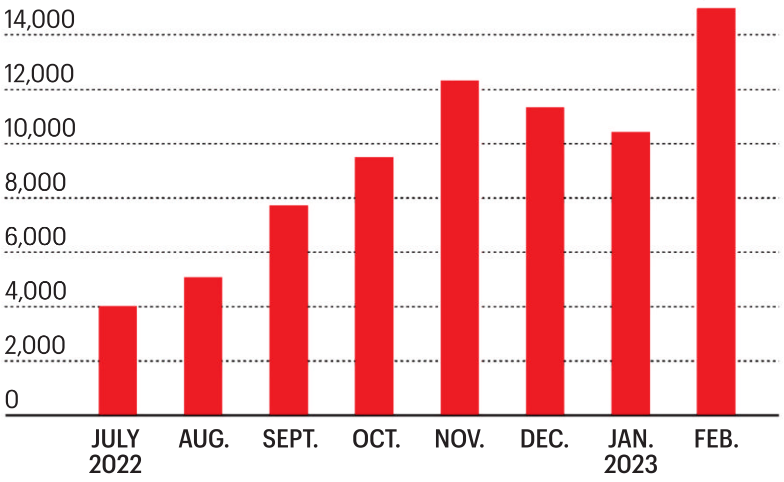
BYD is expanding outside China to challenge incumbent Western automakers in the critical and fast-growing electric car segment.

2022 GLOBAL EV SALES BY MANUFACTURER



SOURCE: EV-VOLUMES

BYD'S MONTHLY CAR SALES OUTSIDE CHINA

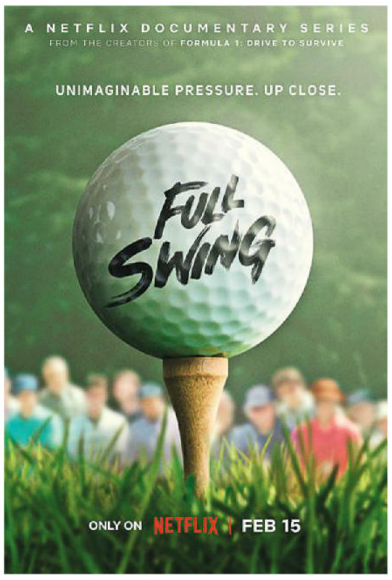


SOURCE: COMPANY REPORTS VIA CNEVPOST

RORY McILROY WATCHES HIS SHOT AT EAST LAKE GOLF CLUB IN ATLANTA ON HIS WAY TO WINNING HIS THIRD FEDEX CUP IN 2022.

The exciting new Netflix series featuring **PGA TOUR** stars is supercharging interest in golf.

Full Swing Ahead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IN RECENT YEARS, INTEREST IN THE GAME OF GOLF HAS been growing. In 2022, more than one-third of the U.S. population over the age of five played golf, followed golf on television or online, read about the game, or listened to a golf-related podcast, according to the National Golf Foundation. And that number is only expected to rise.

So, what better time for Netflix to release its golf-focused series, *Full Swing*? While there was some skepticism about how exciting a docu-series about golf could be when the project was announced late last year, the show documents one of the most intense seasons in PGA TOUR history.

"With how wild professional golf was this last year—what a time to start filming," said Jordan Spieth, one of the show's stars and three-time PGA TOUR major champion, when asked about *Full Swing* at the 2023 AT&T Pebble Beach Pro-Am in Monterey, Calif.

Inspired by the format of the streaming service's popular show *Formula 1: Drive to Survive*, the eight-episode series that debuted globally in February follows some of the biggest names in golf like Spieth, as well as more than a dozen others, including Rory McIlroy, Justin Thomas, Collin Morikawa, and Scottie Scheffler, as they navigate challenges in their professional and personal lives.

"We're incredibly happy with the level of access to the athletes," said Gabe Spitzer, director, Documentary Series, Netflix. "You'll see a level of authenticity here that you haven't seen in the sport before—we couldn't be more excited about it."

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LEFT JORDAN SPIETH AND ONE OF HIS AGENTS, JORDAN LEWITES, SHARE A LAUGH DURING THE FILMING OF *FULL SWING*. **RIGHT** EPISODE 6, "DON'T GET BITTER, GET BETTER," HIGHLIGHTS HOW GOLFER TONY FINAU BALANCES BEING A COMPETITOR AND THE ULTIMATE FAMILY MAN.

By allowing this access, the TOUR hopes that, much like *Formula 1: Drive to Survive* did for auto racing, *Full Swing* can super-charge interest in golf among Netflix's more than 200 million subscribers. Indeed, the series is certainly not just for golf aficionados. Throughout each episode, experts teach viewers the terms they need to know to follow the competition, making it an enjoyable watch for both newbies and experts alike. So far, it seems to be paying off. The series landed on Netflix's list of top streaming shows in the U.S. during the week of its release, and a second season has been announced.

The first episode of season 1, "Frenemies," follows childhood best friends and rivals on the course Spieth and Thomas as they battle to win TOUR events. Netflix was granted unprecedented access to the stars: The episode features childhood home videos and the duo's banter in a private jet as they travel to and from tournaments.

"I gave Netflix access in places I don't normally," said Spieth. "We really, really enjoyed that process of giving a glimpse into what our day-to-day is. I'm a Formula 1 fan because of *Drive to Survive*. I'm one of however many million Americans that it reached … outside of the typical F1 fan base, which was already massive and global. For golf to have the opportunity that auto racing did … what an opportunity."

Yet, Spieth and Thomas are far from the only ones that granted the show an intimate look into their lives. In the season finale, viewers watch as McIlroy prepares to go head-to-head with Scheffler at the TOUR Championship, after suffering a heart-breaking defeat at the Open Championship at St. Andrews. Off the course, cameras capture McIlroy as he works to solidify the future of the PGA TOUR in the midst of an unexpected sport-wide shake-up.

"When we heard the TOUR and all four majors were on board to let us deep inside of golf, I think it was a no-brainer for us," said Spitzer. "We couldn't be happier with how it turned out and the type of athletes that have come on board and have taken a leap of faith to tell their stories."

The PGA TOUR and the teams behind golf's major championships felt similarly. In the not-so-distant past, the TOUR might have been skittish about ceding creative control and allowing unfettered access to its players and brand. But the TOUR recognizes that some of golf's biggest success stories of late haven't necessarily been on the course; they've been told by golfers whose personality and humanity connects with fans on social media. So, to ensure that level of authenticity, neither the TOUR nor any player has approval over the final cuts of *Full Swing*.

"The show should have a pretty profound impact on growing the game of golf," said Spieth, "and hopefully, it will bring more fans to the PGA TOUR." ■

> "YOU'LL SEE A LEVEL OF AUTHENTICITY HERE THAT YOU HAVEN'T SEEN IN THE SPORT BEFORE—WE COULDN'T BE MORE EXCITED ABOUT IT."
>
> **GABE SPITZER**
> DIRECTOR,
> DOCUMENTARY
> SERIES, NETFLIX

WELL

Preventing Burnout Is Now Job One for Bosses

Protecting the bottom line means putting people first.

BY L'OREAL THOMPSON PAYTON

ILLUSTRATION BY
PETE RYAN

▶ **BETWEEN LAYOFFS** and hiring freezes and a newfound laser focus on profits and productivity, today's employees are being asked to do more with fewer resources—a one-way ticket to burnout. As a result, managers are tasked with a seemingly impossible job: motivating their teams while managing them during turbulent times. The key, according to experts, is understanding that investing in empathy is an investment in performance.

"Leadership can be so focused on rallying people around a new goal that they don't give people space to process, or a chance to ask questions and voice concerns," explains Liz Fosslien, a bestselling author, illustrator, and head of communications and content at Humu, a human resources company. "But there are these lingering consequences because people are exhausted."

In fact, 42% of global workers reported feeling burnout in winter 2022, according to a survey from Future Forum—a 2% increase from the previous quarter and the highest since the survey began in May 2021. But that doesn't have to be the case for your team.

Creating space for open and honest conversations—whether in person or virtual—is just one way managers can help employees process change, while also setting the team up for future success. Quick and empathetic action is vital to ensure high performers aren't tempted to search for employment elsewhere.

"People assume the primary driver of anxiety in the workplace is layoffs, and they certainly cause a lot of concern," says Fosslien. "We've done research at Humu that shows the biggest driver of anxiety is a complete lack of direction. One key piece of supporting employees during times of uncertainty is to provide clarity where you can."

Below are seven ways managers can foster stability amid growing workplace anxiety:

1 — Make emotional proofreads a habit. "Before sending an email, we should be asking, How would I feel if I received this?" Fosslien says. "It would save people so much anxiety."

2 — Set clear goals and celebrate mini-milestones. "If you don't have a clear vision of where the entire organization needs to go, you can train your managers to rally the team around a three-month mission," she continues. "Three months is usually a short enough period where you can set a goal that shouldn't change too dramatically, and provide some stability when everything feels up in the air."

Creating goals to improve the company culture can also help teams acknowledge that times are hard but you're actively working to make the situation better. "By orienting your team around a shared goal, you give them something more positive to focus on—and can rekindle their motivation and hope that things will start to look up again," says Fosslien.

3 — Acknowledge what people are feeling. A study published in *Administrative Science Quarterly* found that increasing psychological safety—the idea that you can openly and honestly share ideas, questions, and concerns without being judged or humiliated—improves workplace performance and productivity.

"Even just saying something like, 'I know a lot is changing, and that can be stressful. Let me know what I can do to support you,' can go a long way," says Fosslien.

4 — Invest in your team and their well-being. During tough financial times, monetary rewards such as raises and bonuses may not be possible. But that doesn't mean your team's efforts and hard work should go unrecognized. Carter Cast, clinical professor of strategy at the Kellogg School of Management at Northwestern University, recommends managers invest in their direct reports with tangible benefits, such as professional development funds, additional paid time off, and flexible work options.

A CHECKLIST FOR CHECK-INS

Liz Fosslien of human resources company Humu encourages managers to make it a top priority to check in with employees about how they're doing, ideally in weekly one-on-one meetings. "But if there's a concern almost everyone raises, it may be worth setting aside time in a broader team meeting to discuss it," she says. Here are some sample questions you can use to get the conversation going:

- ▶ **What can I do to better support you?**
- ▶ **What was a challenge this week?**
- ▶ **Is anything unclear or blocking your work?**
- ▶ **What could our team do differently?**
- ▶ **What should we keep doing?**

5 — Praise your team openly and often. "If they're not getting a financial reward, make sure they're getting a psychological award," he says. "Let people know when they're doing good work. Acknowledge it, praise it, and let other people know."

In hybrid or remote-work situations, public Slack channels specifically for praise are helpful, as are shout-outs in the company's internal newsletter. Doing so creates a culture of recognition and encourages colleagues to pay it forward.

6 — Focus on professional development. "When budgets get tight, you don't want to cut professional development because that signals to your employees it's not important, and that's a terrible signal to send," Cast explains.

Fosslien agrees. Every year she encourages her staff to look at jobs they'd like to be doing in the next three to five years and highlight the responsibilities or requirements they don't have yet. "And we find opportunities for them to do that," she says. "It's a really nice way to say, 'I would love to throw money at you, but I can't. But I still want you to feel like you got a lot out of this position.'"

Additionally, Fosslien recommends that companies conduct "stay interviews" to help reduce employee turnover following disruptive changes. Unlike an exit interview, which typically takes place after an employee has submitted their resignation, a stay interview is a more forward-looking conversation that aims to uncover employee dissatisfaction.

"Stay interviews are something your company should be doing regardless of layoffs," she says. "Anniversaries are a good time to ask people, 'What's making you stay? What's making you think about leaving?'"

7 — Set aside time to gather outside of work. Whether it's a post-work happy hour or off-site retreat, Cast suggests carving out time and space to focus on personal renewal. "During tough times, it's even more important to make sure you get together," says Cast. "Doing so does a lot for morale when you can't offer financial perks. People want to feel part of something bigger than themselves."

Above all, experts recommend managers lean into empathy during tough times at work and check in on how people are feeling first and foremost.

Listen to what people are saying, then ask for feedback and advocate for their needs, says Latesha Byrd, chief executive officer of Perfeqta, a talent development agency.

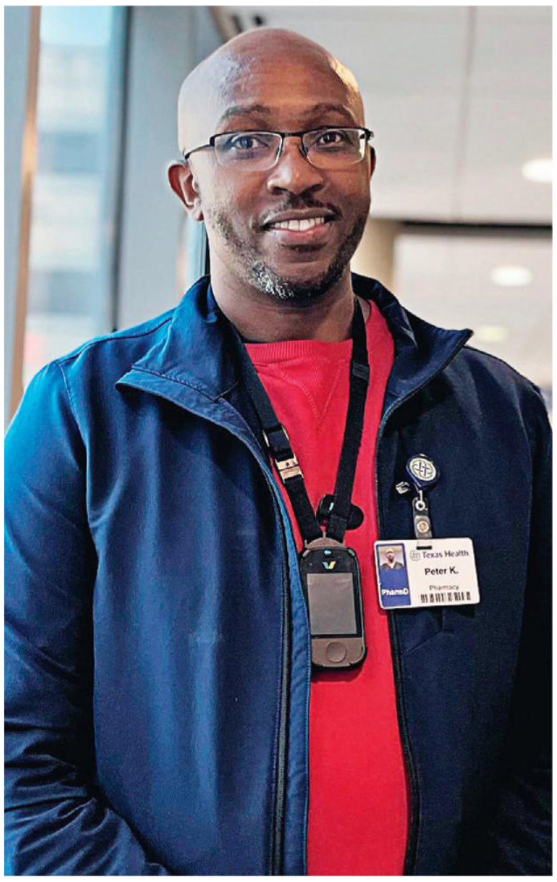
"We have to make sure we're treating people as humans and not just employees."

Supporting Employees Every Step of the Way

Texas Health Resources makes success and upward mobility a reality for its workforce.

> "When I got here, I didn't have any other ambitions other than just doing my best as a pharmacy technician, but I realized that Texas Health had so many opportunities."
>
> **PETER KANYIRI**
> CLINICAL PHARMACIST
> TEXAS HEALTH RESOURCES

WHEN PETER KANYIRI CAME TO THE U.S. from Kenya in 1999, he had no career, degree, or training. Looking to provide for his family, he took a job as a security guard at a California hospital and started pharmacy technician training. After earning a two-year degree, he moved to Texas in 2005 and found a position at Texas Health Presbyterian Hospital in Plano. That could have been the happy ending to his story, but it was just the fortuitous beginning of his journey, thanks to Texas Health Resources.



"When I got here, I didn't have any other ambitions other than just doing my best as a pharmacy technician, but I realized that Texas Health had so many opportunities," says Kanyiri.

When Kanyiri decided to go back to school to become a clinical pharmacist, the nonprofit health system supported his nearly decade-long journey, helping him earn bachelor's and master's degrees while still taking care of his family. In addition to providing a tuition reimbursement program, the organization made it easier for him to work full time while still in school.

"I started working a night shift because it was seven days on, seven days off," he explains. He went to school during the day and worked at night with his manager's support.

Kanyiri eventually pursued his doctorate, with continued support from Texas Health, and when he finished, Texas Health Plano had a pharmacist job waiting for him—the position he still holds today. He credits the people at the health system for making it all possible.

Carla Dawson, chief people officer at Texas Health, says this isn't unusual for the health system, which treats its employees as valued resources rather than just numbers. "Our best assets are our people, and at Texas Health we are blessed with the opportunity to support them as they grow," she says.

It's not surprising then that Kanyiri feels appreciated and supported thanks to a caring management team and a generous benefits package that includes paid time off, a 401K retirement plan with an employer match on up to 6% of his salary, annual raises, family-friendly policies, and continued trainings.

"I tell everybody that it would never have been possible without Texas Health," he says. "The company enabled me to be who I am today." ■

Three years after gaining FDA approval for its new product, "we are on life support," says Evofem's Pelletier.

HEALTH

The Birth Control Market Is Broken

Neglect from investors and insurers is making life next to impossible for contraceptive startups. **BY MARIA ASPAN**

PHOTOGRAPH BY
JESSICA PONS

VALENTINE'S DAY in San Diego this year dawned cold and grim for Saundra Pelletier. It should have been a day of celebration—or at least marketing synergy—for the CEO of Evofem Biosciences, a women's health company with an unapologetically sex-positive mission. Its first and only product is a contraceptive gel called Phexxi, which Evofem markets to the millions of women eager for a birth control option without hormones. More than 100,000 people have gotten a prescription for Phexxi since it launched in late 2020; millions more have watched its $30 million viral commercial, starring *Schitt's Creek* comedian Annie Murphy.

But the past few years have stretched Pelletier's company to its limits. Evofem more than tripled its sales last year, to $16.7 million in the first nine months of 2022—but it lost $68.4 million over that same period and is carrying $84 million of debt. A crucial clinical trial failed in October, dooming Pelletier's efforts to expand Phexxi's market. Now some patients are casting doubt on Phexxi's basic effectiveness, claiming in online reviews that they have gotten pregnant while using the gel.

Some of these problems are of Evofem's own making. But the worst body blows—to Evofem, and to the other companies trying to serve the 47 million U.S. women who use contraception—have come from the broken health care system. Investors and large pharma companies have largely abandoned the women's health field, leaving the development of new contraceptives to small, scrappy specialists like Evofem, Agile Therapeutics, and TherapeuticsMD. But companies that have won approval for their products have quickly discovered that most big insurance companies would not pay for them, despite a federal law requiring them to do so.

As I report in a feature on Fortune.com, the Affordable Care Act in 2012 started mandating that insurers cover the costs of women's contraception. But in practice, they simply don't—especially for newer, more expensive forms of birth control. Most private health care plans are not fully covering about 50% of contraceptive products approved by the FDA after 2011, a damning October report from the U.S. House of Representatives found.

"It's pretty bad—and it's just rampant," says Mara Gandal-Powers, director of birth control access for the National Women's Law Center. "Health insurance companies are not covering newer products the way they're supposed to."

As a result, it's becoming almost impossible for small contraceptives manufacturers to survive. So after Pelletier rose at 4 a.m. on that rainy mid-February day, she got back on the phone with her remaining investors, begging them to keep her company alive for a few more weeks.

"We are on life support," she says later that day. "If the health care plans had followed the rules, we would not be worrying about money."

SINCE THE FDA approved the first oral contraceptive in 1960, pharmaceutical companies have launched dozens of pills, patches, rings, intrauterine devices (IUDs), implants, and more. But just because women have a lot of options doesn't mean we have enough of them. More than 10 million U.S. women of reproductive age don't want to become pregnant but don't use their available contraceptive choices, according to the Kaiser Family Foundation. Daily hormonal pills can have side effects ranging from mood swings to blood clots to long-term cancer risks. IUDs have to be implanted by doctors, in painful (and usually unanesthetized) procedures. Condoms are inexpensive, but they require trusting one's partner to use them correctly. These imperfect choices help explain why even today, 45% of all pregnancies are unplanned.

Now that the Supreme Court has overturned *Roe v. Wade*, increased access to all kinds of birth control is more important than ever. Yet the field is "constantly under-invested in," says Gandal-Powers. It's a familiar story in women's health: Today, only 1% of medical R&D investing goes to female-specific conditions other than cancer.

It all adds up to a huge market of unsatisfied customers—ones that entrepreneurs like Pelletier are eager to serve. Since 2018, the FDA has approved new contraceptives including Evofem's gel; Agile Therapeutics' Twirla, a weekly patch with a relatively low dose of estrogen; and TherapeuticsMD's Annovera, a vaginal ring that can be used for up to a year.

But this is where the roadblocks of health care economics loom large. It can take more than a decade, and hundreds of millions of dollars, to get FDA approval for a new contraceptive. And the startups that have broken into birth control usually don't have the same financial cushions as their Fortune 500 brethren to help them survive while they navigate the regulatory maze.

Agile had to submit its Twirla application three times over a decade—and conduct new clinical trials—before it finally won FDA approval for its patch in 2020. All told, Agile spent about $250 million. "We won—but we came out of that broke," recalls Agile CEO Al Altomari, a veteran of Johnson & Johnson's women's health business. "And we've never clawed our way back in the public market, because now we've got to face the insurance companies."

47M

▲ **NUMBER OF WOMEN IN THE U.S. WHO USE CONTRACEPTION**

1%

▲ **SHARE OF MEDICAL R&D SPENDING THAT GOES TO FEMALE-SPECIFIC HEALTH ISSUES OTHER THAN CANCER**

SOURCES: CDC; MCKINSEY & CO.

Insurers largely insist that they are complying with the law, despite their coverage denials. "Optum Rx has worked with our payer clients to help them comply with the ACA requirements and to meet the needs of members," a spokesperson for UnitedHealthcare Group and its pharmacy-benefit manager, Optum Rx, said via email, in a response characteristic of the industry. In practice, *Fortune* found, the insurers are wriggling through any available loopholes, often relying on outdated FDA documentation to determine what they will and won't cover.

The Biden administration is talking about enforcing the law more strictly, and any such crackdown would be a boon to women of reproductive age. But it may not come soon enough to save Evofem and other companies actually investing in birth control. Evofem was delisted from the Nasdaq in August; Agile, which lost more than $25 million last year, is on the brink of following suit.

"When an entrepreneur comes to me and says they want to start a new women's health care company," Altomari adds, "I tell them, 'Don't do it.'"

Read our full investigation at fortune.com/section/features. A grant from the NIHCM Foundation helped fund reporting for this story.

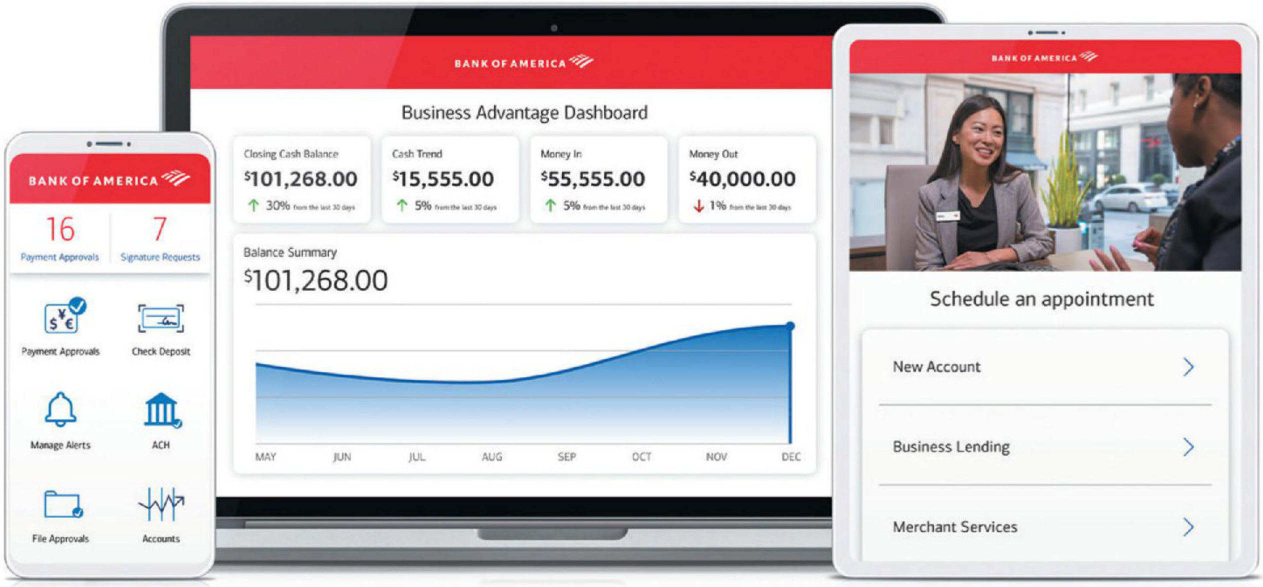
Reviewing the forecasting insights before ordering more inventory.

Realizing he's afraid of heights.

Booking time with a banker after going over the books.

Tracking same-day payments while stocking the shelves.

Business solutions so powerful, you'll make every move matter.


BANK OF AMERICA

16 Payment Approvals

7 Signature Requests

Payment Approvals
Check Deposit
Manage Alerts
ACH
File Approvals
Accounts

BANK OF AMERICA

Business Advantage Dashboard

Closing Cash Balance $101,268.00 ↑ 30% from the last 30 days

Cash Trend $15,555.00 ↑ 5% from the last 30 days

Money In $55,555.00 ↑ 5% from the last 30 days

Money Out $40,000.00 ↓ 1% from the last 30 days

Balance Summary $101,268.00

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INVESTING

Buying the A.I. Boom

Eleven A.I. stocks and four funds that stand to generate returns for investors.

BY LUCY BREWSTER

▶ **WHEN IT COMES TO A.I.,** investors have a torturous choice to make: Believe the hype and jump in headfirst, or ignore the hype and potentially miss out on a once-in-a-generation tech transformation. "It's the early days in terms of picking winners and losers" of the A.I. boom, explained Scott Helfstein, head of thematic solutions at Global X ETFs. "We're not sure yet of the different ways that we're going to be able to monetize this technology. Some are obvious, and some are not obvious—and it might be that the ones that are not obvious become more important over time," he said. According to analysts at PricewaterhouseCoopers, A.I. could add up to $15.7 trillion in global GDP in 2030, which is more than the current output from India and China combined.

But experts caution that investing in generative A.I. is far more nuanced than just buying Big Tech stocks that have integrated the technology. "This could be another one of those moments where we're getting to the peak of the hype cycle, so companies are going to spend the money, but they're going to find it's a lot harder to build something truly compelling," explained Peter Cohan, business professor at Babson College. "Microsoft has a big investment in OpenAI, and they also have GitHub, which has a lot of the software that can be used for developing A.I., yet I still don't know if that's going to generate enough revenue for Microsoft for A.I. itself to become a significant part of its business," he noted.

But it's impossible to ignore that in an era of high inflation and subpar index returns, companies and funds that focus on A.I. and machine learning have strong growth potential. For example, the Global X Robotics and Artificial Intelligence ETF (BOTZ), which tracks 44 holdings of companies involved with industrial robotics and automation, nonindustrial robots, and autonomous vehicles, is up 18% year to date, while the S&P 500 is just up 3%. For investors who want to get in on this burgeoning area, here are the smartest ways to approach investing in A.I.

Big Tech

A plethora of companies across sectors are integrating A.I. into their operations, from Land O'Lakes to Microsoft to cybersecurity firm SentinelOne. So you may already be indirectly investing in A.I. Big Tech is leading the charge from both investment and innovation standpoints. "A.I. is being defined actively by leading tech giants," explained PitchBook tech analyst Brendan Burke, citing the leaders as Microsoft (MSFT), Alphabet (GOOGL), Amazon (AMZN), and Meta (META). "Those companies have the research labs and the operational tools to bring basic innovations in A.I. algorithms to market," he said.

If you want to bet on Big Tech, Microsoft has forged ahead the furthest with its $10 billion investment in OpenAI and the subsequent rollout of revamped search service Bing with new A.I.-powered search features. While Bing's features have debuted with some bizarre and disturbing interactions with users, if the technology does successfully upend Google's search, Microsoft has a huge market share to gain. "We believe incorporating ChatGPT capabilities into Bing may provide Microsoft with a once-a-decade opportunity to unseat Google's Search dominance," wrote D.A. Davidson software analyst Gil Luria in a recent research note. Luria increased Microsoft's price target from $270 to $325 and gave the firm a buy rating. "While Google has announced a project to add [generative] A.I. to Google Search, we believe Bing's head start could create a permanent share shift," Luria wrote. Yet with the speed bumps in the rollout of Bing, it is clear that generative A.I. chatbots still have a long way to go.

Bank of America analysts, on the other hand, wrote in a recent report that Meta's stock has the most to gain from A.I. implementation, citing the company's incorporation of A.I. into its Reels video feature. "We expect an outsized impact from the adoption of A.I. given rich consumer data sets and massive ramp-up in A.I. investments, led by Alphabet, Meta, and Amazon," the report detailed. Bank of America gave Alphabet and Amazon buy ratings in its forward-looking 2023 report.

Comparing the A.I. boom to the dotcom boom of the early 2000s, it is clear that if you pick the right companies you can still make out very well. "Even if you bought Amazon at the height of the dotcom boom, you still would have made a lot of money," said Tom Taulli, a startup advisor and A.I. author.

But the giants have a problem—they're huge. "It's harder to move the needle for [Big Tech] as opposed to some of these smaller or midsize companies that are going to wind up playing in space that is going to be significant," Helfstein said. "Maybe they won't be as recognizable, but they have better growth potential, which can turn into investment returns," explained Helfstein.

The 'picks and shovels' of the A.I. boom

During the California gold rush, some of the savviest investors eschewed chasing gold itself and made a mint investing in the picks and shovels that those looking for riches needed for their search. Cohan sees an analogy in A.I. "It might well be that the initial beneficiaries of A.I. expansion are going to be in the hardware space, instead of the software space," Helfstein predicted.

So what "picks" do experts recommend? PitchBook's Burke explained: "A.I. growth is based on the improved efficiency and the decreased cost of [graphics] processing units (GPUs). The most basic enabler for these new models is the latest hardware innovations coming from chip giants such as Intel (INTC), Advanced Micro Devices (AMD), and Nvidia (NVDA)." Semiconductors are necessary for A.I. software to function, and the companies that produce them will supercharge its expansion.

Nvidia is currently the leading chip producer in the A.I. space. "A lot of capital is going to go into these generative A.I. startups," said Cohan. "And the question for investors is: What technology will they be using to build their APIs? The answer is that they're very likely to be using Nvidia chips."

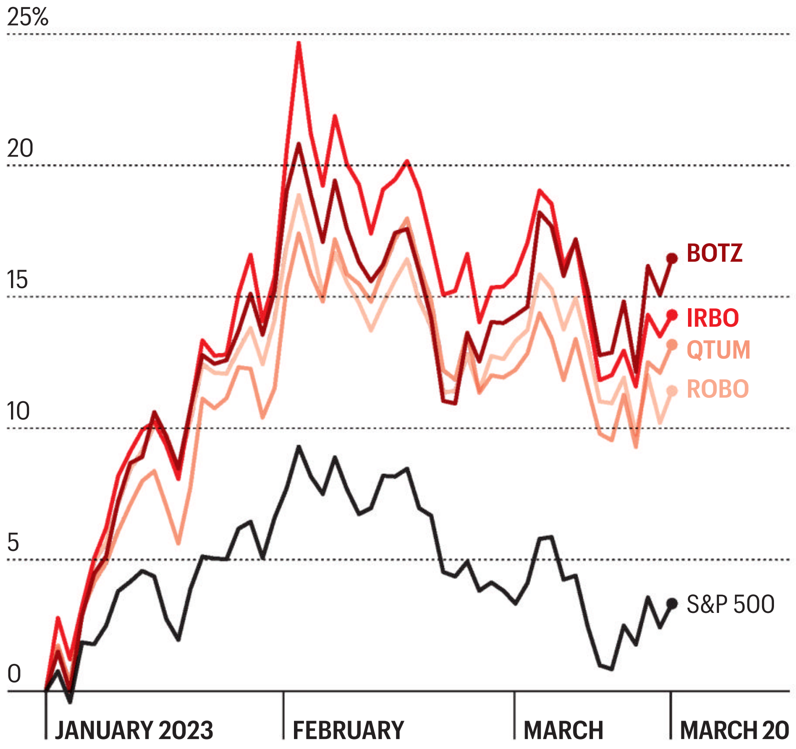
Beyond chips, there is software infrastructure to support the huge volume of data that the A.I. explosion will rely on. "The next layer up, there's a need for enterprises to integrate their data into centralized data warehouses to improve the performance of their A.I. models," Burke explained. "That's where database management vendors, such as Snowflake (SNOW) and Alteryx (AYX) can help enterprises," he said. Zacks gives both companies buy ratings.

Dynatrace (DT) is another cloud-computing infrastructure firm that

CHAT GDP

These four A.I. funds have trounced the S&P 500 year to date and also give investors exposure to a wide variety of leading-edge tech companies.

A.I.-FOCUSED FUND PERFORMANCES



SOURCE: S&P GLOBAL

WHO WILL BE CROWNED IN THE QUEEN CITY?

WELLS FARGO
CHAMPIONSHIP

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> **“IT’S THE EARLY DAYS IN TERMS OF PICKING WINNERS AND LOSERS.”**
>
> **SCOTT HELFSTEIN,** HEAD OF THEMATIC SOLUTIONS AT GLOBAL X ETFs

could have upside. The company operates a software intelligence platform that uses A.I. and automation. Bank of America thinks the stock, which is up 1% year to date, has further to run, giving it a buy rating.

Another winner could be Palantir Technologies (PLTR), which is projected to increase its market share and revenue as one of its biggest clients, the U.S. government, expands its military A.I. implementation. In October 2022, the company signed an $85 million contract with the U.S. Army Materiel Command to use its software to increase military A.I. capabilities. The company was founded in 2003 by a group of VCs including Peter Thiel, Nathan Gettings, Joe Lonsdale, Stephen Cohen, and Alex Karp. While the stock is up 31% year to date, analysts (like those at BofA who have a “buy” rating on the stock) expect it can further capitalize on the A.I. boom.

A.I.-focused funds

Though A.I. technology has had a breakthrough year, there are already a robust number of funds and ETFs that give you exposure to the sector, which is a win for investors. “With these emerging technologies, people are better off playing a basket of companies, rather than putting their chips in a single one,” said Helfstein. He drew a comparison to Tesla in the electric vehicle industry. While Tesla was first out of the gate to dominate the EV market, competitors are now lining up to surpass the reigning EV king: “I don’t think we’re gonna live in a world that’s dominated by a single A.I.—it’s going to be a competitive market.” Not to mention the inherent unpredictability of an industry evolving at warp speed. “This can be a volatile space; you never know what could happen tomorrow, so diversification is important,” explained Taulli.

A solid option is the Global X Robotics and Artificial Intelligence ETF (BOTZ), which is up 18% year to date and has $1.64 billion in assets under management. Its top holdings include Nvidia, Intuitive Surgical, Upstart Holdings (UPST), Keyence (KYCCF), and ABB (ABB).

BlackRock’s iShares Robotics and Artificial Intelligence Multisector ETF (IRBO) is another option, which has 118 holdings and around $288 million in assets under management. Year to date, the fund is up 15%, solidly outpacing the S&P 500.

A widely diversified option is the ROBO Global Robotics and Automation Index ETF (ROBO), which holds 79 stocks with the top five holdings representing just 9% of the fund’s value. Year to date, the ETF is up 12%.

The Defiance Machine Learning and Quantum Computing ETF (QTUM) has roughly $116 million in assets under management, and its top holdings include Nvidia and Alteryx. Year to date, its return is roughly 11%, and the fund received a five-star rating from Morningstar Research in December 2022.

Overall, experts advise caution—and patience—when it comes to investing in generative A.I. “Investors should keep in mind that breakthroughs tend to be nonlinear,” explained Helfstein. Having just seen a period of what he calls “exponential innovation,” don’t be shocked if now we “level off for a little bit” before the next surge.

INNOVATORS

A NEW LIST LINKS PATENTS AND PROFITS

BY ANDREW NUSCA

“IF A PRODUCT falls below four stars, we have six months to rework it or kill it.”

Munchkin CEO Steve Dunn takes creativity seriously in his quest to build the world’s top baby brand—which is why it lands at No. 8 on our new list of America’s Most Innovative Companies. In the 33 years since Dunn founded Munchkin, the company has earned renown for items that add a dash of clever to the common to increase parents’ peace of mind—for example, spoons that blanch when they touch food that’s too warm for an infant to eat. That might explain why this baby-bottle maker lays claim to more patents than employees.

Munchkin stands out in another way: It’s among the few of the 300 companies on our list that isn’t thought of primarily as a tech company. (Giants like Alphabet and Apple figure prominently.) The list, which we developed in partnership with research firm Statista, honors companies that are transforming all kinds of industries from the inside out. Our ranking also shows that innovation isn’t just a nice-to-have—nearly every company on the list posted revenue growth in the past three years.

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‘OHANA’ MEETS AUSTERITY

Under pressure from shareholders, Salesforce cofounder **MARC BENIOFF** is cutting costs and curbing M&A for the first time—not to mention managing painful layoffs. Can he juggle tough times and a “we’re family” culture?

BY MICHAL LEV-RAM

ADDITIONAL REPORTING BY KYLIE ROBISON

Benioff has weathered several downturns since cofounding the pioneering cloud-computing company in 1999. But he's never had as much to lose.

PHOTOGRAPH BY
CHRISTIE HEMM KLOK

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MARC BENIOFF, cofounder and CEO of Salesforce, has taken a lot of hits in recent months. First, activist investors went after him, attacking his expensive taste in acquisitions and agitating for greater efficiency at the enterprise software maker. Then, his employees lashed out: After about 8,000 of them were laid off in January, many of those who remained took to Slack—ironically, one of Benioff's expensive acquisitions—to complain that the company's touchy-feely culture was just a facade.

"I'm willing to take the bullets and the cuts and the vilification," Benioff, 58, tells me during a wide-ranging interview that took place via phone while he was on a flight to the East Coast. "That's what you have to do as CEO, especially through difficult times."

Luckily for Benioff, at least the numbers have been kind: In early March, Salesforce released its most recent quarterly results, beating analyst estimates and setting better-than-expected projections for its next fiscal year. Revenue in the company's last quarter was up 14% year over year while adjusted margins (excluding things like $828 million in restructuring charges) rose to 29.2%, the highest in its 24-year history.

The earnings report was good news for Benioff and for his company's stock price. But that doesn't mean the longtime tech leader is in the clear. For starters, the current era of economic uncertainty is far from over, and activists are still pushing Benioff not just to keep increasing profits but to prove he can put a viable succession plan in place. (In yet another recent gut punch, former co-CEO and heir apparent Bret Taylor left in January; Benioff called the resignation "bittersweet.") Then there's the other, even more legacy-shaping test of his mettle: Over the past few years, Benioff has become the poster child for stakeholder capitalism—the idea that financial stockholders are not the only interests a business should consider. That was fine when those stakeholders were happy and the economy was growing.

"It's much harder when things are contracting than when things are expanding," Benioff says of bringing people into his view of the world and business's role in it.

Indeed, Benioff now finds himself having to listen to—and prove that he can answer—stakeholders with all sorts of new demands. His ability to navigate these loud voices, from employees asking for more flexible work-at-home policies to shareholders agitating for leaner operations, will prove to be a useful case study not just in Benioff's style of "empathetic" leadership. In many ways, it could also serve as a referendum on the whole model of stakeholder capitalism.

Benioff insists he's just as committed to the *ohana* (Hawaiian for "family") culture he has cultivated at Salesforce. But he also admits that there are new challenges for CEOs. The hardest part of being a leader today, says Benioff, is "explaining the unexplainable," a line he has now used in several interviews. What does that mean? It boils down to this: Justifying layoffs, especially after more than a decade of economic growth, is hard. Even for a gifted marketer. That's why Benioff now finds himself having to sell his toughest product yet—that austerity, which investors are clamoring for, can coexist with *ohana*.

"It [layoffs] is something that you never want to have to do, but everybody knows you have to do it, because it's just the nature of business," says Benioff, and then quickly adds: "But that doesn't mean that you can't have a great company, and that you can't be a great place to work."

▶ **BENIOFF IS TRYING** to tell me that these are challenging times for business leaders—a common CEO mantra in today's climate. At least, that's what I think he's trying to tell me. As is typical in conversations with the always-loquacious Benioff, the conversation soon takes a sharp turn to the philosophical.

“I think you have to have, as the Japanese say, *shoshin*, or beginner’s mind,” the CEO tells me. “As the leader, you have to realize that the past is gone, and that you’re going to have to create a new future. But it also means that the kind of leadership notion that you’ve had in the past is also gone. In the expert’s mind, there are few possibilities, but in the beginner’s mind, there’s every possibility.”

To be sure, the recent layoffs at Salesforce weren’t the first in its history. In 2000, when the dotcom bubble burst, Benioff laid off 20% of his workforce (and Salesforce has had small “adjustments” since). But that was before the company was public, back when it employed only 100 workers. It was also around the time that Benioff launched the company’s 1-1-1 model, which dedicates 1% of the company’s equity, 1% of its product, and 1% of employees’ time to philanthropic causes. The CEO has long championed business as the “greatest platform for change.” But he really solidified his role as one of the lead evangelists of the stakeholder capitalist movement during the pandemic.

“In the pandemic, it was CEOs in many, many cases all over the world who were the heroes,” Benioff told a remote audience during the 2021 World Economic Forum gathering, which took place online instead of in the snowy mountain town of Davos, Switzerland. “They’re the ones who stepped forward with their financial resources, their corporate resources, their employees, their factories, and pivoted rapidly—not for profit, but to save the world.”

Benioff, along with a team of other big-name execs, helped procure 50 million units of personal protective equipment like gowns and masks early on in the pandemic, shipping it from China to hospitals in the United States via chartered airplanes and trucks. As the pandemic was unfolding, demand exploded for software that helps businesses run their operations online, like Salesforce’s customer relationship management tools. Benioff (and lots of other tech leaders) went on a hiring spree, onboarding 20,000 employees in a one-year span—and of course many more through acquisitions like Slack.

Late last year, that growth came to a sudden stop amid concerns of a global economic slowdown. Tech companies from Amazon to Zillow started laying off workers. In January, Salesforce jumped on the bandwagon, announcing that it would cut 10% of its workforce.

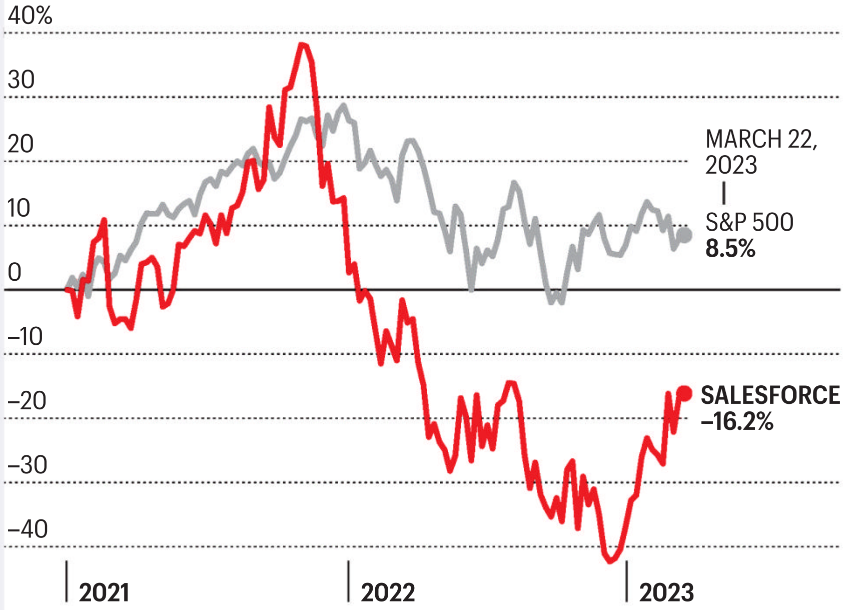
True to his character and communication style, Benioff infused the bad news with hints of *ohana*, spelled out in a company memo: “The employees being affected aren’t just colleagues. They’re friends. They’re family. Please reach out to them,” Benioff wrote. “Offer the compassion and love they and their families deserve and need now more than ever. And most of all, please lean on your leadership, including me, as we work through this difficult time together.”

Other companies, like Amazon, have been decidedly more blunt. To wit, CEO Andy Jassy’s March 20 memo announcing a second round of layoffs: “I’m writing to share that we intend to eliminate about 9,000 more positions in the next few weeks… This was a difficult decision, but one that we think is best for the company long term.”

POST-PANDEMIC BLUES

Salesforce’s cloud software business, and stock price, boomed as the world adapted to remote work. The comedown has been painful.

SALESFORCE CUMULATIVE TOTAL RETURNS SINCE 2021



SOURCE: BLOOMBERG

That all-business tone might sound harsh. But it does raise the question of how useful *ohana* really is to those who just lost their jobs.

While Benioff likes to say this is his third recession, many of his younger, newer hires haven’t yet lived through even one downturn during their careers. And even those who were not laid off have had to make uncomfortable changes. Early on in the pandemic, Salesforce embraced remote work, telling employees they could work from anywhere. When the company acquired collaboration tool Slack for $27.7 billion in July 2021, Benioff said integrating the product would help customers “make the digital transformation.” But that transition to remote work wasn’t as smooth as expected.

Benioff made waves when he took to Slack, not long before announcing layoffs, to ask why employees hired during the pandemic showed “much lower productivity.” To the CEO, this was an effort to solicit feedback. But to some employees, Benioff’s musings felt like a betrayal, a stark contrast to the pandemic-era benefit of getting one Friday off per month, which had just recently ended.

The reaction inside Salesforce was harsh, with some employees accusing Benioff of being tone deaf in Slack channels. Other recent cost-saving measures, such as lower annual "gratitude" bonuses and the decision to abandon Slack's snazzy San Francisco headquarters, have also generated employee blowback.

Asked whether tech employees have gained too much power in recent years, Benioff says no, and points to Slack as an effective—if lively—way to communicate directly with employees on a variety of issues. But even that direct access has its limits. "It's hard for them [employees] because they don't understand why you're taking certain actions or how it's going to affect them," says Benioff. "It's understandable because we've had an up market for more than a decade."

In recent months, Salesforce has summoned certain employees back to the office. Some percentage of the company's workforce will always be remote, as was the case prepandemic. But those who don't have that designation are now being asked to come into the office at least a few times a month depending on their roles and teams, says Benioff, noting that tracking productivity is easier for certain functions, like sales and, to a lesser degree, engineering.

"We hired a lot of people, and those folks don't have the benefit of knowing others and having the office experience," Benioff says of his evolving views on remote work. "Bringing them back into the office is becoming more important than I think anyone realized."

But again, justifying a return to office, however flexible, however backed by data, is hard to do when you've just spent the past three years telling employees they could work from anywhere. Just like announcing layoffs after you've hired hordes of new employees and told them they were like friends and family.

IN RECENT MONTHS, Benioff has gotten caught in the crosshairs of some conservative politicians who have jumped onto the anti-ESG bandwagon. Vivek Ramaswamy, 2024 Republican presidential hopeful and former executive chairman of Strive Asset Management, which owns a small stake in Salesforce, has criticized the CEO for choosing politics over profits. And with some blaming Silicon Valley Bank's collapse on a supposed "distraction" by diversity efforts, it's easy to see how some of Salesforce's speed bumps could be smeared with similar allegations.

But Benioff says his devotion to using business as a platform for societal change is intact.

"There's been a politicization of stakeholder capitalism which is in many cases unfair," says Benioff. "What employees want is to be treated well, and to make sure that their companies are doing the right thing, which is at the heart of stakeholder capitalism."

8,000

LAYOFFS IMPLEMENTED BY SALESFORCE SINCE JANUARY

Benioff has a point: Many of the times he's taken a stand, like when he threatened to pull business out of Indiana because of an anti-LGBTQ law, came from listening to what his employees were telling him, not the other way around. At least as of now, Salesforce's biggest activist shareholders—the ones who have actually acquired sizable stakes—are not speaking out about the company's diversity programs, nor the fact that Benioff has made it his life mission to plant 1 trillion trees by 2030. They're much more concerned with boosting software sales and profits. And in a succession plan.

Bret Taylor wasn't the first co-CEO to leave Salesforce, but his departure was a surprise. So were the subsequent exits of Stewart Butterfield, the former head of Slack, and of Mark Nelson, the ex-CEO of Tableau, another pricey Salesforce acquisition. "Each person has to make their own decisions," says Benioff.

Asked whether he would pursue the co-CEO model again, Benioff says probably not anytime soon. "Right now, profitability is my only strategy," he says, adding that he does have a current succession plan in place. (Who is the new heir apparent? Unsurprisingly, Benioff won't say.)

Whatever the plan is, Benioff is clearly under pressure to solidify it. Activist investors clamoring for change have already pushed Salesforce to appoint three new directors to its board. And unlike some other founder-CEOs, Benioff isn't shareholder-proof. The board, if not satisfied, could vote him out.

"I actually think it's very healthy," Benioff says of the role activist investors have played in his company's decisions in recent months. "You're going to meet people you've never met, and they're going to have perspectives that are completely different. Their primary focus is to make money, and that's what they're doing."

For now, Benioff doesn't see the goal of making money—and getting Salesforce on a more profitable track—as mutually exclusive with planting trees or investing in DEI initiatives or calling his workforce his family. "My performance speaks for itself, and that's all I can hope for," he tells me after his plane lands. That's true. But now comes the hard part: getting his stakeholders—all of them—to agree, even in hard economic times. In other words, to explain the unexplainable.

Instilling Confidence in a World of Change

RSM, a provider of assurance, tax, and consulting services for the middle market, empowers employees and clients through a culture of understanding.

FORTUNE 100 BEST COMPANIES TO WORK FOR® 2023

NOW MORE THAN EVER, COMPANY LEADERS ARE recognizing the benefits of listening to their workforces. When employees feel heard, they experience an increased sense of belonging and engagement, resulting in even better financial outcomes for the company, according to research by the Workplace Institute. This power of listening is apparent at RSM, the nation's leading assurance, tax, and consulting provider for the middle market, where understanding employee and client needs serves as the core value and driver of success for the company.

"We listen to understand," explains Brian Becker, CEO and managing partner for RSM. "That's a key differentiator for us in a world where people often only listen in order to respond. Listening helps us build richer relationships with our colleagues and our clients."

At RSM, leadership is committed to understanding the unique talents and aspirations of its 16,000-person workforce. RSM believes these differences are the true strength of the company. So, the Chicago-based organization encourages employees to share insights and needs through surveys and listening sessions, where they can openly ask questions and give feedback. This qualitative and quantitative data is used to inform the initiatives that empower employees in their personal and professional lives, whether it's career development and mentorship or support for their physical, emotional, and financial well-being.

In addition to understanding, the culture at RSM is shaped by its "5 Cs": caring, curious, collaborative, courageous, and critical thinkers. This foundation helps RSM foster an inclusive environment that encourages all of its employees to bring their authentic selves to work every day.

"All 5 Cs are important, but 'courageous' might be the most important of all," says Becker. "We want people to be courageous—to state what they need as an employee and to pursue their passions in work and in life."

RSM's commitment to understanding extends not only to its employees, but to its clients as well. Employees at RSM take the time to truly understand their customers' needs in order to offer bespoke ideas and insights and commit to helping them make confident decisions about their futures.

"At the end of the day, we want to make a difference for our clients, our team members, and our communities," Becker adds. "That's really the driving force that motivates us to keep pushing and evolving."

EMPLOYEES FROM RSM'S MINNEAPOLIS OFFICE SPRUCE UP THE GROUNDS AT A LOCAL SCHOOL DURING THE FIRM'S ANNUAL VOLUNTEER EVENT.

ARE LAYOFFS A CONFESSION MANAG

Tech CEOs who are blaming their layoffs on the staffing up they did during the boom years of the pandemic should ask themselves some tough questions.

BY GEOFF COLVIN

WHEN MARK ZUCKERBERG declared 2023 "the Year of Efficiency" for Facebook parent Meta Platforms, several questions seemed unavoidable: Aren't companies supposed to be efficient every year? If this is the Year of Efficiency, what were all the previous years—the Years of Squandering? Is Zuckerberg suggesting Meta can return to profligacy in 2024?

Most pointedly: If Zuckerberg had discovered efficiency a few years earlier, would the 21,000 layoffs planned or carried out since last

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OF BAD EMENT?

November have been necessary?

Similar questions nag other tech giants—Alphabet, Amazon, Microsoft, Salesforce—plus other players that in total have announced layoffs of more than 150,000 employees in the sector in 2023. We heard little talk of efficiency when tech stock prices were rocketing to giddy all-time highs in the waning days of 2021. Now many of those companies' CEOs are suddenly embracing belt-tightening and other business virtues taught in Management 101. Were those CEOs

ILLUSTRATION BY **BRIAN STAUFFER**

guilty of self-delusion, of refusing to confront hard reality?

"Layoffs are definitely a confession of poor management," Jeffrey Pfeffer, a professor of organizational behavior at Stanford Business School, told me. His reasoning: Research shows that generally, layoffs don't improve a company's fortunes. Quite the opposite: They don't reliably raise a company's profits or stock price, but they do reliably reduce remaining employees' morale, commitment, productivity, and trust. University of Colorado professor Wayne Cascio, who has spent a career studying layoffs, concludes, "As a group, the downsizers never outperform the non-downsizers."

Contrary to widely held belief, layoffs are not inevitable. Some companies—Patagonia, Toyota, and others—have avoided layoffs for decades, and have thrived.

Companies that have gone through heavy layoffs can attest even decades later to the damage they inflicted: Famously, Hewlett-Packard faced a crisis of survival when World War II ended. Most of its revenue from a major customer, the U.S. government, suddenly evaporated. The cliff-like drop in government spending overall triggered a deep recession. To avoid certain demise, the company laid off 60% of its employees. Bill Hewlett and Dave Packard were so traumatized by the experience that they resolved never to let a mass layoff happen again, and in their 30 remaining years of running the company, they never did.

Aren't there difficult moments when layoffs are the best of bad options? Yes, says Peter Cappelli, a management professor at the University of Pennsylvania's Wharton School, but those moments are rare. "The evidence seems pretty clear that except for really unusual situations—the company is about to go under, it's the start of the Great Recession—large layoffs actually seem to hamper the ability to restart when things improve," he tells *Fortune*. "There is good evidence for this from financial data." For example, voluntary employee turnover increases significantly at companies that conduct mass layoffs. The total costs of turnover—severance costs of those laid off, plus recruiting and training replacements when business recovers—can be 1.5 to 2.5 times a given job's annual salary. "All in all," writes Cascio, "the significant indirect costs associated with employment downsizing may wipe out the direct savings in labor costs."

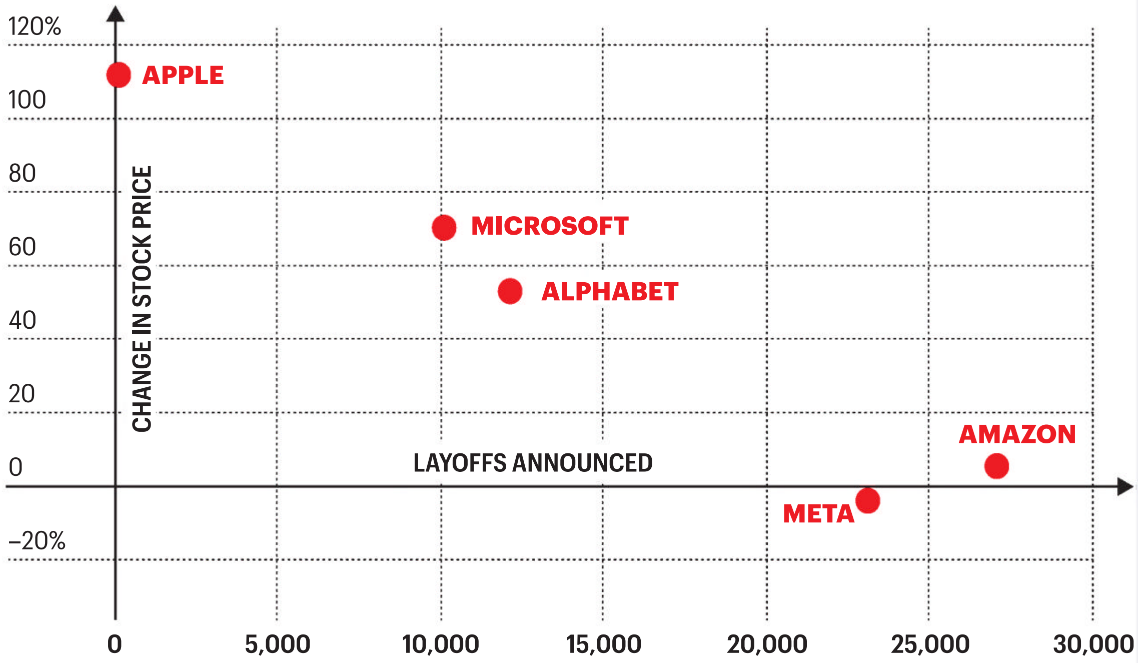
> “As a group, the downsizers never outperform the non-downsizers.”
>
> **WAYNE CASCIO,** UNIVERSITY OF COLORADO

One could argue that now is one of those "really unusual situations" Cappelli cites, at least for tech CEOs. The pandemic was a once-in-a-lifetime boom for many of their companies. Some CEOs have framed their recent layoffs as the aftereffect of staffing up to meet the pandemic-era surge in demand. Salesforce CEO Marc Benioff put it in those terms, for example, when he announced a layoff of 8,000 employees: "As our revenue accelerated through the pandemic, we hired too many people leading into this economic downturn." Stripe cofounders Patrick and John Collison, in an email telling employees they were laying off 1,100 workers, wrote, "We overhired for the world we're in."

But look closer and that explanation loses much of its punch. Far from heavying up in response to the tech boom of the pandemic, some of the firms now laying off thousands did the opposite. SEC filings show that Alphabet, Meta, and Salesforce had been hiring robustly since long before the pandemic, and each increased headcount at lower rates

WHO MANAGED BEST?

STOCK PRICE CHANGES AND LAYOFFS ANNOUNCED, JAN. 1, 2020–MARCH 21, 2023



SOURCE: S&P GLOBAL

during 2020 and 2021 than in the two years prior. (Relevant information for Stripe isn't available because it isn't publicly traded and does not publish audited data.)

In addition, some of the layoffs have jettisoned employees whose employment had nothing to do with the pandemic. Alphabet, for example, is laying off employees in some of its long-running moonshot projects, including its Verily health care company, its Intrinsic robotics unit, and its Waymo autonomous vehicles business. Amazon is culling staff from units that work on the Alexa digital assistant, Echo speakers, and physical stores, all of which have been chronic money losers.

Tech CEOs who insist the whipsawing economy forced them to lay off workers must also confront the inconvenient example of Apple, which has announced no layoffs since the pandemic began. SEC filings show that Apple experienced the same boom as the rest of Big Tech; its rate of revenue growth more than doubled. Yet CEO Tim Cook barely nudged the company's hiring upward, staying at the modest single-digit rates of growth the company had maintained for years. Those are far lower rates of staff increase than at Alphabet, Amazon, Meta, Microsoft, or Salesforce before or during the pandemic. Apple remains America's most valuable company. Since January 2020 its stock has clobbered the Nasdaq, the S&P, the Dow, Alphabet, Amazon, Meta, Microsoft, and Salesforce.

Skeptics might note that Apple is the only company in America's Big Tech group that gets most of its revenue from manufactured products, and that it outsources the manufacturing, mostly to Foxconn. But Foxconn couldn't get enough workers into its Chinese iPhone plants as a result of COVID lockdowns and employee protests. (Analysts estimate Apple missed out on $7 billion of

HOW TO HANDLE A MID-CAREER LAYOFF

During a restless night last November, Liz McLemore checked her work email around 3 a.m. and felt her stomach drop. A meeting with the chief people officer had been added to her calendar for the next day—and ominously, there was no subject line.

"I had been working long enough to know that's never a good sign," the 45-year-old tells *Fortune*. "I knew this was a fork in the road." Sure enough, she found out her email marketing role at a tech company had been eliminated; for the second time in three years, she was out of a job.

Experiencing a layoff mid-career can be scary. Middle-aged workers may face age discrimination or a dearth of job options at their experience level and salary requirements.

But it can also present opportunities, as McLemore found. She finally had the confidence—and the wisdom—to go after what she actually wanted. McLemore worked with a career coach, who helped her identify what was most important to her in her next role.

After meeting with the coach, McLemore decided progressing to the C-level was less important than finding a job that aligned with her values. Once she established that, she posted on LinkedIn that she was looking for a new role. Within days, she had an interview scheduled at a company that eventually hired her.

The layoff "gave me the reins to help craft what I want these next 20 years to look like."

TAKE CARE OF YOURSELF

Even if a layoff turns out for the better, it can be traumatic. Not only do workers lose their income, health insurance, and retirement match, but many also lose their sense of identity. A job loss can take a profound toll on mental and physical health.

Your community, including friends and former colleagues, can offer support to help you get through a difficult time, says Lindsey Pollak, a career and workplace expert.

Beyond feelings of isolation, the financial strain of a layoff can be especially acute. Though mid-career professionals typically earn more, they also tend to have more expenses, says career coach Kyle Elliott.

It might make sense to look for "lily pad" roles, says Elliott. "It can be helpful to have a backup if the job search takes longer than you're used to."

MAKE THE MOST OF YOUR NETWORK

But how do you find that new role? At a certain point in your career, your network becomes much more important than crafting the perfect résumé. "It's not what you know, it's who you know" is an adage for a reason.

Your network includes LinkedIn, Pollak says. If there's one good thing to come out of the pandemic, it's that job loss is not as stigmatized as it once was, she says. Don't be wary about posting on social media that you are open to opportunities or reaching out to friends and former colleagues. "You have to be your own HR department."

UPDATE YOUR PROFILE

Familiarize yourself with how hiring tech works to get a leg up on the algorithm game. "Find three job descriptions for your dream job, and write your résumé off of those job descriptions," says James Nicholas Kinney, chief people officer at a leading ad agency.

Make sure your skills are current. "No one uses 'Microsoft Office proficient' anymore," Kinney jokes.

To that end: Never stop learning, says Pollak. "My rule of thumb is if I hear of something twice I don't know about, I learn about it," she says. Reframing a mid-career layoff as an opportunity can provide clarity—and help you find a new role you love.

"A layoff can be a blessing in disguise," says Pollak. "It forces you to make a change you may have wanted to make." *—Alicia Adamczyk* revenue because of this labor shortage.) While other Big Tech firms were announcing layoffs, Apple needed more workers, not fewer.

No single factor explains Apple's superior performance, says analyst Shannon Cross of Credit Suisse. But in the flush days of the pandemic, many companies went on spending sprees, she says. By contrast, "Apple generated $90 billion of free cash flow in 2021, and they didn't spend like crazy. It's not that they don't invest. It's just that they're very, very careful about where they do it. There were science fair projects going on at other companies that Apple probably didn't pursue."

For some Big Tech firms, the trauma of mass layoffs is more than a painful response to tough times. It's a company culture transition to a new life stage. "We've never had an efficiency focus in the company before," Benioff admitted to Wall Street analysts in March, "because we've had 24 incredible years where we've had to just grow, grow, grow." It won't be that simple anymore. (Benioff had more to say to *Fortune* on the topic; see our story in this issue.)

Even more striking is the tone of Zuckerberg's latest letter to employees, in which he announces 10,000 layoffs in addition to the 11,000 he announced last November. He uses the words "efficient" or "efficiency" 20 times, and much of his message could have been written by the CEO of an old, bloated industrial company. "Flatter is faster," he says. "In our Year of Efficiency, we will make our organization flatter by removing multiple layers of management." The days of "move fast and break things," Zuckerberg's founding motto, seem very long ago.

These waves of layoffs are indeed a confession of bad management. And perhaps it's time to acknowledge that the Big Tech companies created their own plight. Now much depends on which companies will take the next step after a confession and mend their ways.

A 'GOOD' LAYOFF IS A MYTH FOR WORKERS

Jose Ramos believes Meta handled its November 2022 layoffs flawlessly, even if he was one of 11,000 workers who lost their jobs.

"The execution was just perfect," says Ramos, who worked in partner operations support at Facebook. Meta successfully limited its security risks and protected customer privacy by restricting access once the layoff announcements occurred—while still being transparent with workers.

"The communication was very respectful," he says. "I would say even humane... They were telling us exactly what was going to happen."

Yet for all that Meta did right, the job cuts were still a blow. "The layoff process was shocking to many, including me," Ramos admits. That's true for most people: 52% of laid-off workers reported they saw no warning signs and were caught by surprise, according to a ZipRecruiter survey conducted in January of more than 2,000 U.S. residents who lost their job in a layoff within the past six months. Ramos still hasn't found a new job five months after he was laid off.

How leaders manage a layoff can have a long-term impact on their reputation and company culture. Where some leaders receive praise for their compassionate response, others face backlash. But when you're the one receiving the pink slip, is there really any such thing as a good layoff?

Ramos doesn't think so—despite all his praise for his former employer. "I think that all layoffs are bad. But they are, unfortunately, part of our economy, and a system in which companies need to please shareholders."

A former Salesforce program manager who lost his job in January agrees. "I don't think there's ever going to be such a thing as a good layoff because no one wants to lose their job. Everyone wants to leave on their own terms," he says. *Fortune* agreed to keep this employee anonymous as he is in final rounds of job interviews.

"I'M PRETTY SURE THIS IS NOT HOW YOU GO ABOUT [A LAYOFF]—THE CEO SENDING AN EMAIL OUT AT 5 A.M. TO 8,000 PEOPLE THAT THEIR ROLES ARE GONE."

Salesforce CEO Marc Benioff's early-morning layoff communication left many workers frustrated. "I've never been a part of any layoffs directly [before this], but I'm pretty sure this is not how you go about it—the CEO sending an email out at 5 a.m. to 8,000 people that their roles are gone. It's like dropping a bomb," the former Salesforce employee says.

"Fundamentally, layoffs are not a good thing for the worker. But how the worker experiences that moment may result in some really good outcomes," says Bruno Yoffe, a manager who was part of the 9% of workers laid off from Asana in November.

Yoffe, who moved from Pittsburgh to San Francisco in 2021 for a role at Asana, also learned he was laid off with an early morning email. "I read my email, and I just remember my mind went blank," Yoffe says. "Elements of the email were thoughtful, but it was pretty harsh.

"I'm not just bummed about losing my job. I'm bummed because I liked it. I liked Asana. I liked the people," Yoffe says.

Employees understand that sometimes a reduction in workforce is necessary. But it's jarring to go from hearing one minute that a company is meeting or exceeding its financial goals to learning that your role has been made redundant in an effort to retrench.

In the case of Salesforce, the former employee says the layoffs were so shocking because there was no real warning. "Our numbers were good, and I figured we kind of passed the wave of layoffs in December, so we would have been good to go," he says.

"I don't think transparency was provided here at all," he continues. "Just be honest with us."

—*Megan Leonhardt*

THE BEST COME TO CONNECTICUT

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SILICON VALLEY MELTDOWN

TROUBLE

Four founders bought a $40 million ski mountain in Utah to build a utopia for tech’s elite. It didn’t work out quite as planned.

BY LILA MACLELLAN

ADDITIONAL REPORTING BY
KINSEY CROWLEY

THE

AT SUMMIT

Sunrise over the Horizon neighborhood on Powder Mountain.

THE THEME WAS NARNIA meets Walden meets 1920s speakeasy at the 2012 Summit Series Basecamp conference. The rapper Q-Tip and DJ Jazzy Jeff played a set; the president of Georgia made a speech; rescued mountain lions surprised guests at a nature talk; and the illusionist David Blaine roamed the halls of the Lake Tahoe resort, randomly delighting attendees with his tricks.

Just four years after a group of idealistic entrepreneurs in their early twenties started Summit Series, it had grown into a phenomenon: an invite-only multiday conference with an eye-popping guest list of CEOs, founders, wellness gurus, philanthropists, and celebrities who came for the intense workshops, heady talks, and legendary parties at stunning vacation destinations. At an annual Summit Series conference or a "Summit at Sea" cruise, one might find oneself in a meditation session with Jeff Bezos, learning about indigenous peoples' rights from Harrison Ford, or petting puppies with A$AP Rocky.

The four young men who created Summit Series—Elliott Bisnow, Brett Leve, Jeff Rosenthal, and Jeremy Schwartz—would usually be in the mix, hobnobbing with guests in the craft cocktail bar hidden behind a broom closet or practicing lucid dreaming in the geodesic dome. But at Lake Tahoe in 2012 they had to sit out the fun, they recall in *Make No Small Plans*, a book about the conference series that they published last year. Instead they were holed up in a windowless room at the resort, working behind the scenes to charter a 737 jet to Utah.

The morning after the conference ended, they ushered 60 of the 800 Basecamp attendees onto the plane for a last-minute all-expenses-paid mystery trip. A fleet of 30 rental cars was waiting in Salt Lake City to deliver the still-baffled guests to a hastily constructed yurt at the top of a mountain in the town of Eden, Utah—Powder Mountain.

The group arrived just in time to watch a spectacular sunset streaked over the Wasatch mountain range. Only then, around a barrel fire, did the Summit team explain what was going on.

"You might be wondering what you're doing here," Rosenthal began, according to the book. "We're going to build a place where people from around the world can form friendship, where their families can spend time together, and where their kids can grow up and start families of their own. And we want you to be part of that story with us."

The founders had always seen the Summit Series mission as bigger than a string of epic gatherings, they explained. They were building a community of people who wanted to fix the world's ills by creating businesses that gave back. They were collecting people who accepted the Summit mantra "Make no small plans" as a personal creed. They needed a year-round home, and this literal summit could be it.

They just needed $40 million to buy the mountain.

THE GROUP'S PLANS for Summit Powder Mountain—already the largest ski resort in the United States by skiable acreage—were anything but small. The young men, in partnership with two venture capitalists, laid out a utopian vision of a "new urbanist" community, peopled with tech-industry wunderkinds, showbiz and sports stars, and "the billionaire set." It was to be a place where big, world-changing, philanthropic ideas would be hatched.

Powder Mountain—with its funky 1970s-era ski lodge, Powder Keg dive bar, and smattering of older homes and condos—was to be transformed into a hub for innovation and socially conscious entrepreneurship, and to bring much-needed economic development to Eden, an off-the-beaten-path town in a tucked-away valley.

The $40 million real estate deal would give the Summit group nearly 10,000 acres, land equal to roughly two-thirds of Manhattan, but they pledged to keep development eco-friendly: a four-acre village and 500 elegant but restrained single-family homes built into the mountainside, as well as modernist condos, workforce housing, co-working spaces, coffee shops, farm-to-table restaurants, and upscale hotels.

In presentations to county officials in Utah, the group promised more: a science center, convention space, an outpost for the U.S. Institute of Peace, a satellite campus for an online university, a Montessori school, and an alternative medicine center they called "a brain lab." High-tech greenhouses would allow the community to produce its

PREVIOUS SPREAD: PAUL BUNDY COURTESY OF POWDER MOUNTAIN

Summit Series founders, from left, Elliott Bisnow, Brett Leve, Jeff Rosenthal, and Jeremy Schwartz, photographed in 2017 at the Skylodge on Powder Mountain.

MORGAN RACHEL LEVY—REDUX

own food, and there was talk of water treatment facilities that would recycle the residents' sewage into potable water while extracting rich nutrients.

The pitches landed. In short order, the Summit Series founders raised more than the $40 million they needed to buy the mountain in 2013. They have never shared the complete list of original investors, but their book names, among others, Virgin Group founder Richard Branson; Martin Sorrell, founder of WPP, the world's largest marketing company; self-help author and entrepreneur Tim Ferriss; Beth Comstock, former vice chair and chief marketing officer at GE; and Blake Mycoskie, founder of Toms shoes. Making investments of between $500,000 and $2 million each, these founding members' leap of faith earned them credit to one day build a home on Powder Mountain. Other property owners include Ken Howery, a cofounder of PayPal; Miguel McKelvey, cofounder of WeWork; and Netflix cofounder Reed Hastings, who bought a plot eight years ago. Utah county officials also threw in their lot with the first-time developers from California, backing them for an $18 million bond to build infrastructure.

But a decade later, the investors and the county are still waiting for the promised utopia to materialize.

Today the sparsely populated resort consists of a few dozen new homes and the Skylodge, a luxe yurtlike clubhouse. Some 90% of the promised 500 houses have yet to be built. Many lots remain empty or are in a state of unfinished construction. Water and sewer lines have been laid down, but the plans for next-generation wastewater recycling and greenhouses have been shelved. There are no hotels, full-service restaurants, or shops, let alone a brain lab. The new urbanist village high street still exists only in architects' renderings.

The plans for a bustling, beautifully designed playground for the creative and socially conscious have simply not come to pass. How did things go so very wrong?

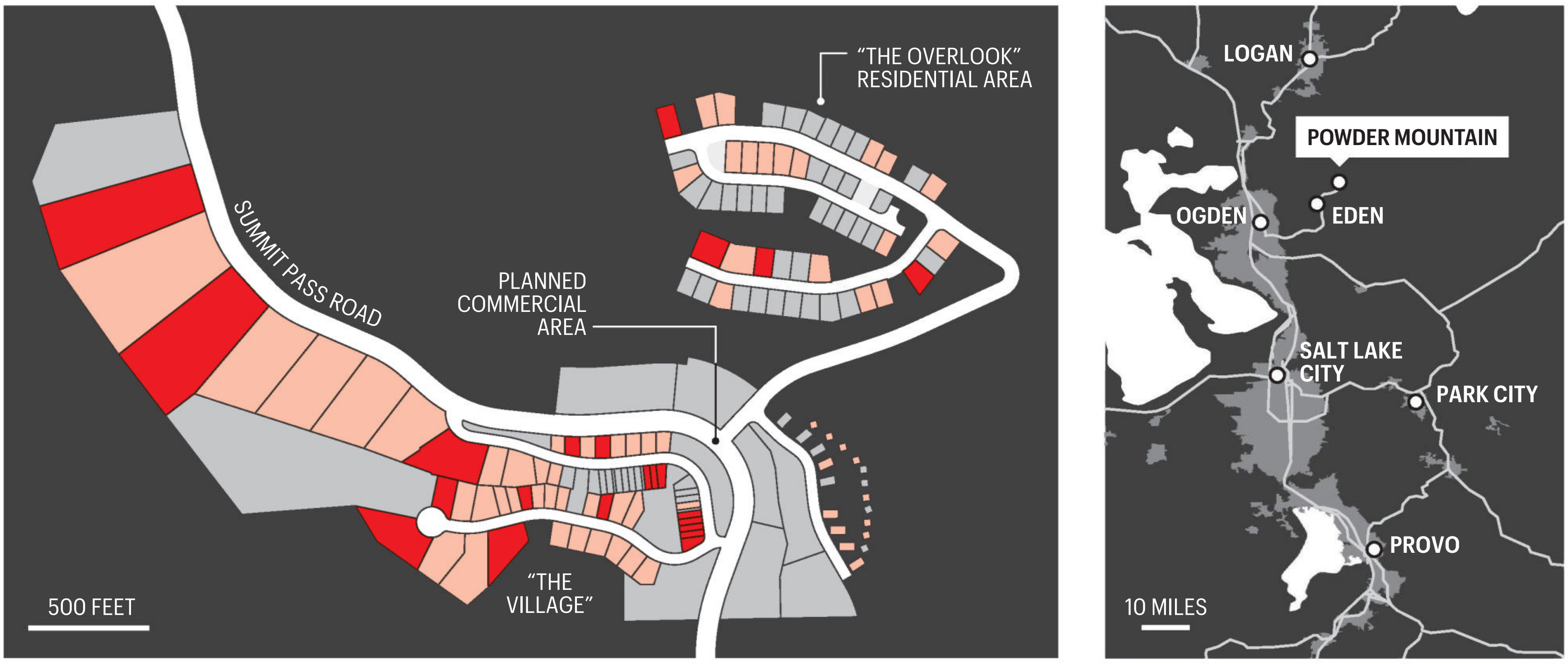
The project that once generated so much excitement is now a sore subject for many. Some of the Summit Series attendees who initially invested or bought plots on the mountain grumble about the slow pace of development. The resort has ruffled feathers in Eden, where locals worry that teens working on the mountain have been exposed to a flashy, corrupt lifestyle, rife with sex, drugs, and booze. And the promised economic boost has not materialized.

Meanwhile, the developers are mired in a tangle of lawsuits and countersuits with investors, including a group of individuals from China seeking green cards in exchange for investment.

And on top of everything else, the logistics of holding full Summit Series conferences at almost 9,000 feet have turned out to be prohibitive. In recent years, the original Summit founders have been less and less involved with the mountain and have reduced their ownership stake. Changes in the structure of the group developing the resort leave its future in question. Everyone has started to

A MAIN STREET THAT NEVER CAME TO BE

Plans for Summit Village included hotels, co-working spaces, apartment buildings, restaurants, conference space, wellness centers, and an institute. In 2023, it has only a few houses and no businesses.



SOURCES: WEBER COUNTY ASSESSOR, RECORDER, AND TREASURER OFFICES

SUMMIT POWDER MOUNTAIN DEVELOPMENT: "THE VILLAGE" AND "THE OVERLOOK" NEIGHBORHOOD DETAIL

⬜ LOTS UNSOLD 🟧 LOTS SOLD, REMAINING UNDEVELOPED 🟥 LOTS SOLD AND DEVELOPED

refer to it simply as Powder Mountain again—removing "Summit" from the name.

Bisnow brushed away the suggestion that things didn't go as planned on Powder Mountain. "It reminds me of 'Shoot for the stars, land on the moon,'" he told me when I asked him to compare the resort today with the plans his team presented at the project's inception.

And indeed, Powder Mountain remains a beautiful place to ski. But despite the founders' resolution to make "no small plans," it's hard to deny that what exists on Powder Mountain is a much smaller plan. As Netflix's Hastings told me on a Zoom call from his cabin on the mountain, the project has shed its "we're going to change the world with our interactions" ethos, and has become just "a normal real estate development thing."

It's easy to see the appeal of the original plan for Summit Powder Mountain: a place that married altruism with hedonism, drawing some of the most creative entrepreneurial minds of our era. But did it ever make any sense? Can a group of founders and celebrities really change the world from an elegant ski resort? As Silicon Valley's era of seeming omnipotence comes to a close—with bank failures, cryptocurrency meltdowns, and wave after wave of layoffs—this city upon a hill is starting to look like just another Silicon Valley moonshot that fell flat.

▶ **THE SUMMIT FOUNDERS** and their partners are the latest in a string of entrepreneurs who have tried to make a ski resort on Powder Mountain work. The first was in 1972, when the Utah physician Alvin Cobabe opened a ski park on the land his father had used as a winter range for his sheep. With its large flat top, Powder Mountain became one of the country's few "upside-down" ski mountains: You drive up and ski down.

For decades the mountain mostly attracted local skiers, who affectionately called it "Pow Mow." Only an hour from Salt Lake City, Powder Mountain boasts a reliable yearly abundance of fresh powder (the resort has never needed snowmaking machines). Still, while other ski hills slightly closer to Salt Lake City developed a higher profile—nearby Snowbasin, for example, hosted the 2002 Olympics—Powder Mountain remained a relatively untouched jewel.

By 2012, the resort was floundering, having changed hands multiple times. Powder Mountain was then owned by a private equity company that had intended to build a monster development, one that would have milked every inch of the mountain's developable space, adding golf courses and thousands of homes. Those owners—who had paid a rumored $150 million for the mountain before the 2008 housing crisis—wanted to incorporate their own town on Powder, a plan that didn't fly with Eden's residents or local government.

That's when a venture capital investor named Greg Mauro, who lived in Austin but spent his winters skiing in Eden, stepped in. Mauro had nervously watched the battle play out, he said in a TEDX talk about the resort in 2017, titled "A Town as a Startup." He felt protective of the land he considered a personal refuge. And as the cofounder and managing partner of an early-stage VC firm focused on education technology, he saw an opportunity for a low-density but high-value real estate development, as well as a social impact incubator of sorts.

Mauro was a Summit Series enthusiast and was fresh from a transcendent conference in 2011 when he decided to ask the four young conference founders to partner with him to purchase Powder Mountain. He flew to Malibu, where they shared a house, and a half-hour coffee turned into an eight-hour planning session, Mauro recalled.

Then things moved fast: "Seventy-two hours later we were standing at the top of Powder Mountain, the largest ski resort in the United States—my secret spot—and said, 'Let's buy it.'"

▶ **AFTER THE PREVIOUS** battle with developers, the $40 million deal with the Summit group looked like a win for county officials. Mauro and the Summit founders purchased the land at a steep discount, and they promised to limit development and preserve the uncrowded, affordable Powder Mountain skiing experience as a public resort for locals. The group hired an urban planner and expert in "sacred geometry" who identified a "saddle" on the mountain with "an incredible feminine energy" as the site for the village, Mauro said in his TEDX talk.

Aesthetic and environmental guidelines to prevent "McMansionification" were laid out: There would be no faux châteaus or enormous concrete manses on this mountain. The initial rules for homeowners capped single-family homes at 4,500 square feet (later expanded to 5,500 square feet). And buyers had to work with one of a few preselected architects dedicated to a sleek, wood-centric style called "heritage modernism." Residents were prohibited from putting in lawns or backyards, to reduce water use and so that the terrain would remain as untouched as possible.

Mauro held a 50% stake in the project, and the Summit founders owned the other half. The joint entity became Summit Mountain Holding Group (SMHG). To introduce the project to the network of Summit-goers, the group began holding weekend events on the mountain and marketing homesite lots at Summit conferences. The actor and tech investor Ashton Kutcher invited several founders, as described in *Make No Small Plans,* including Instagram cofounder Kevin Systrom; Google cofounder Sergey Brin visited too. (None of these three purchased homes.)

SMHG then turned to Weber County, where Eden is located, for more capital. In a series of presentations for county commissioners, the group laid out what the county could expect if it agreed to back the developers for an $18 million bond to build a public road, water and sewer lines, a 400,000-gallon water tank, and other infrastructure. The resort would bring half a billion in spending on construction, they said, and it would create some 1,000 jobs. In all, they foresaw a $2 billion buildout over two decades (though that number was later amended to $1 billion). And, they told the county, the resort would draw tourist dollars to the town of Eden, as well as creators and celebrities who would likely set up their own businesses, galleries, restaurants, and theaters nearby. Weber County agreed to cosign the bond, lending SMHG its impeccable credit and access to cheap money.

▶ **WHEN NEWS BROKE** in 2013 that the twentysomething founders of a super-exclusive ideas and wellness conference had bought a fading Utah ski resort, there was a flurry of breathless national media coverage. There was also some derision: "4 Young Founders Just Bought a $40 Million Mountain to Party On," Business Insider reported. The *Financial Times* called it "Davos for Dudes." Gawker's ValleyWag blog went with "Pricks on a Slope."

The Summit founders leaned into the hype. "What Tesla did to cars," Bisnow told a visiting reporter from the *New York Times* in 2015, "we're going to do with towns!"

But executing on that vision was always a tall order. And from the beginning, the founders recall in their book, there had been plenty of red flags. The group had learned that 20 other entities had toured the mountain and decided to pass. A former partner who had worked in real estate acquisitions told them that buying and developing a resort would be "very, very, very risky." Another VC friend ran through a litany of reasons they'd

> “72 hours later we were standing at the top of Powder Mountain, the largest ski resort in the United States… and said, ‘Let’s buy it.’”
>
> **GREG MAURO,** SMHG

end up in over their heads, drowning in line items and change orders. “The ordinances are going to destroy you!” he told them.

Sure enough, the eager but inexperienced young developers soon found themselves slamming against the same kinds of obstacles that had scared other investors and developers away from Powder Mountain.

Adding to the normal challenges of complex real estate development: It’s terribly difficult to build a town at nearly 9,000 feet. Most ski villages sit at an elevation of about 5,000 or 6,000 feet. At Powder Mountain, winds and weather make construction pretty much impossible throughout the winter.

Just traveling up and down the mountain with heavy loads takes planning. The county road leading up the mountain is said to be the steepest paved road in Utah, and one of the steepest in the country. Since Summit took control of the resort, three people have been killed in crashes after losing control of their vehicles on the 12-mile stretch. (News reports didn’t connect these accidents to SMHG or the resort.) In recent years, the company has also had to deal with COVID-related delays and soaring costs for construction materials.

To make matters worse, using Powder Mountain as a base for large Summit Series conferences hasn’t worked, Bisnow told me. The resort did host one conference in 2013, “Summit Outside,” for more than 800 people. The Summit team set up glamping tents and temporary venues for talks and yoga, and in a beautifully photographed stunt, they laid a single communal dinner table that stretched for a quarter of a mile. But that weekend was a lesson in the challenges of running large gatherings on a mountain, said Bisnow: It left a large impact on the land, and was a “logistical nightmare.”

“You need a place for everybody to stay,” he told me. “You also need bathrooms, you need kitchen facilities, you need eating facilities, you need shower facilities. And to try to build all that is just too expensive, which means that tickets have to be too expensive.”

Any future programming on the mountain will likely be small weekend events, Bisnow told me. The main Summit Series conferences are still being held in other locations, such as Palm Desert, Calif., or on cruise ships.

▶ **ANOTHER LOGISTICAL HURDLE:** the implosion of a loan agreement for up to $120 million with a group of investors who were seeking green cards via what’s known as a “golden visa” program. In the project’s early days, Mauro and Bisnow sought funding for infrastructure building from a group of Chinese nationals looking for permanent residency in the U.S. using the EB-5 immigration program, which fast-tracks green cards for those who invest at least $500,000 in a job-creating U.S. business.

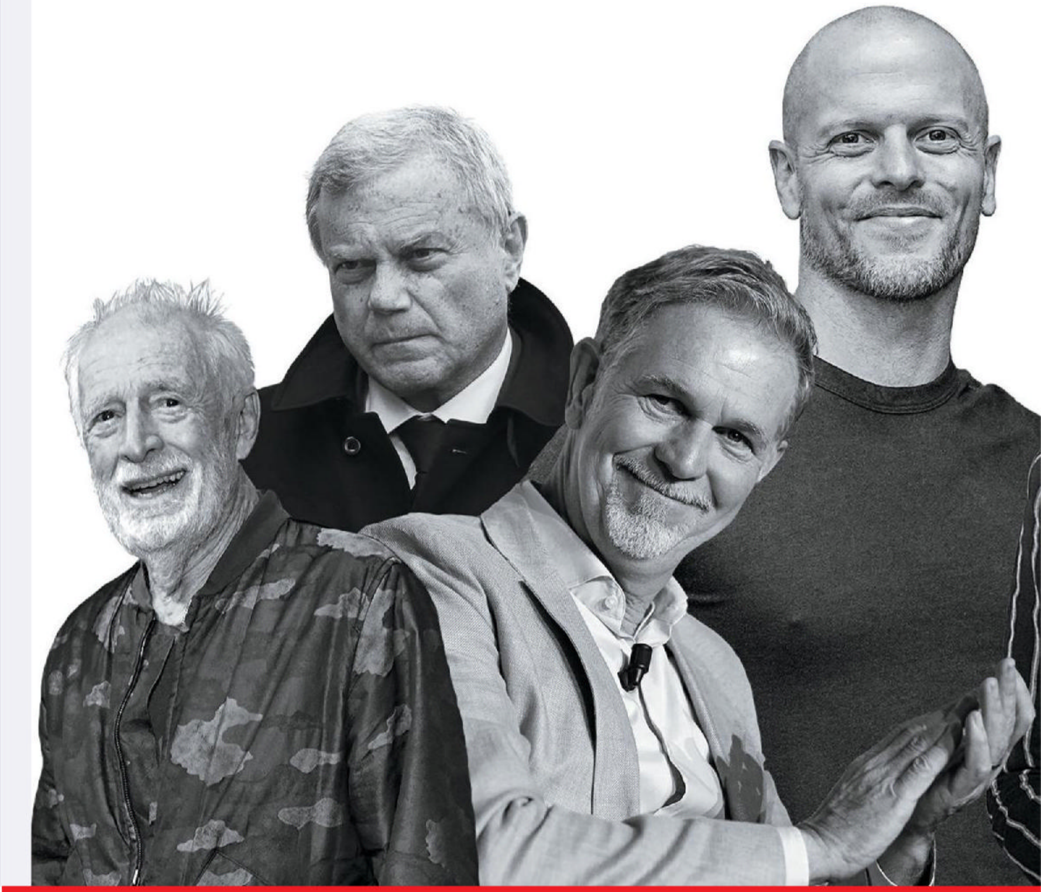
SMHG reached an agreement with one of China’s largest immigration brokers to borrow the money over five years. The loan was to be pivotal: Mauro says the founding team had lined up a high-end ski resort developer who was ready to build Summit Village, including a Standard Hotel, by 2019. However, SMHG only received about $40 million from the lenders before a conflict erupted over the details of the loan arrangement. The Chinese group issued a default notice against SMHG, and the developers sued (complaining in their lawsuit that the default notice was preventing them from finding other investors).

Court documents show the bitter tone of the dispute, with the Chinese group accusing SMHG of elitism and SMHG suggesting that the lenders may have been involved in money laundering. By now, the legal battle has dragged on for two years and the resort developer has moved on. (Representatives for the EB-5 lenders declined to comment on the record for this story.)

That’s not the only lawsuit the Powder Mountain proj-

PEAK POWDER MOUNTAIN

Among the investors and homeowners who bought into Summit Powder Mountain are, from left: Chris Blackwell, founder of Island Records; Martin Sorrell, founder of WPP; Reed Hastings, cofounder of Netflix; Tim Ferriss, the entrepreneur of *4-Hour Workweek* fame; Beth Comstock, former vice chair of General Electric; Blake Mycoskie, founder of Toms Shoes; and Richard Branson, Virgin Group founder.



LEFT TO RIGHT: DAVE BENETT—GETTY IMAGES; PA IMAGES/REUTERS; ERNESTO S. RUSCIO—GETTY IMAGES; STEPHEN OLKER—**GETTY IMAGES**; BRAD BARKET—GETTY IMAGES; MARIO ANZUONI—REUTERS; JOHN LAMPARSKI—GETTY IMAGES

ect is embroiled in. In 2021 a New York–based designer sued SMHG to recoup his founding member investment of $500,000. He claimed the contract he signed—the standard agreement offered to all original members—stipulated that he would be entitled to a refund if by June 2015 at least 50% of the construction of the Main Street of the planned Summit village had not commenced. Needless to say, in the summer of 2015, Main Street was still a concept. The case was settled on undisclosed terms at the end of last year.

Another suit involving two individuals who tried to buy a plot on the mountain—Nouriel Roubini, the economist known as Dr. Doom for his eternally pessimistic forecasts, and Michael Eisenberg, a New York–based real estate broker—is still active.

THERE'S ALSO A culture clash with locals in Eden, a mostly Mormon town in a squarely Republican county. Some of those with lifelong memories of Pow Mow have soured on the out-of-towner developers who arrived a decade ago. A three-year-long dispute over water rights (which held up the development and at one point led to a campaign of lawn signs proclaiming "Summit sucks water") didn't help, leaving both sides frustrated.

"If you're asking me about Summit, I don't have anything but bad things to say," one resident told me when I visited Eden in January.

Locals were eager to tell me anecdotes and rumors about what goes on up on the mountain since "the Summit people" arrived: hallucinogens, wild parties, sex workers visiting. (These accounts could not be confirmed, and few of those telling such stories were willing to go on the record.)

Before Summit's arrival, one exasperated local told me, Eden residents didn't have to worry about Ford GTs careening down the mountain and flipping over, as one did in 2020. (The driver, a New York–based singer and music producer, and his passenger suffered only minor injuries.)

I met Shanna Francis, editor of the hyperlocal Ogden Valley News site, in a Mexican restaurant in Eden that used to be her grandparents' general store. Her eyes welled up as she spoke of skiing on Pow Mow as a child. She won't ski there now, on principle, she told me, because she worries about the mountain's ecosystem.

Despite the Summit group's vows to collaborate and engage with the existing community, Francis told me, the two populations—of the resort and the town—live in separate worlds, interacting only when locals get jobs as drivers or house cleaners up on the mountain.

When I asked what she'd like to see happen to Summit's flailing development project, Francis didn't mince words: "All I've ever wanted was for them to go bankrupt, get bought out, and have it turned into a conservation area."

WEBER COUNTY HASN'T actually lost money in the Powder Mountain development—the Summit group's bond payments have so far been made on time. But there has been no year-round influx of well-heeled visitors, no blossoming of new businesses in Powder Mountain's aura. That's the real disappointment, Weber County treasurer John Bond said: "All of that was extremely, I would call it, heavy. It was a big deal."

The lawsuits, the local friction, and the pandemic were all roadblocks, but several people involved told me that the project's biggest impediment was internal: constant changes in leadership at the resort and organizational dysfunction, much of it reflecting the team's inexperience.

When I visited Bond's office in January, he had covered a large conference table with piles of Summit Powder Mountain paperwork—a vivid illustration of the bureaucratic travails of years of negotiations. For county officials, the chaos was extremely challenging, Bond told me.

Bisnow pointed out that working on big infrastructure projects can be stressful, and relationships are going to be tested—but he said he and Mauro are still friends. "I think really highly of Greg," he said. "He has a lot of great ideas."

Mauro said he respects and admires Bisnow. "All business relationships have alignments and disagreements of course, and mine did as well," he told me. "But he and I are both very aligned with the overall aspirations for the mountain as a uniquely special place."

In Bond's telling of the story, there were no real villains. He called Mauro "one of the smartest guys I've ever met";

what he saw in the two founders with big ideas was good intentions, not malice. He said the Skylodge and the houses built so far are "beautiful."

Still, meetings with Summit and the county's lawyers sometimes became heated. Mauro and Bisnow were constantly changing plans and revisiting decisions, excited by "volumes of ideas," said the treasurer. County officials had never developed a mountain either. "We were all in this dance together that we weren't used to," Bond told me. "We didn't recognize the music."

Public filings required under the terms of the bond agreement with the county show that the Summit team faced a $2.2 million cash-flow shortfall by 2017 and was hemorrhaging money, paying out an estimated $14 million in payroll in 2016 and 2017 combined. The group decided to add a professional board.

When I asked Bisnow what he would have done differently on Powder Mountain, he admitted: "I wish we'd put a board together even sooner."

Roni Yehuda, a diamond-industry executive who became Powder Mountain's board chair a year ago, downplayed the impact of the lawsuits and other problems facing the development, saying none of it is holding up further construction. But he acknowledged to me that in the last few years, the mountain has completely shifted business strategies. Rather than act as a real estate developer itself, SMHG is now selling off parcels of land on Powder Mountain to smaller interests, including two sets of residents who are building neighborhoods on the mountain.

Powder is also partnering with the developers of a neighboring lodge, Monument Ranch—which will be an exclusive members-only club and a "rugged luxury adventure community" that takes its members cat skiing and heli-skiing, fishing, and hunting—a far cry from the açai bowls, acro-yoga, and philanthropic musings of the average Summit Series event.

IN THE EPILOGUE to *Make No Small Plans,* Bisnow and his coauthors write that they got in over their heads when they bought the mountain. They were too trusting of others, and too inexperienced to know what they didn't know about being developers. They don't explain where that leaves owners of houses or home sites on the mountain now. And not surprisingly, the book doesn't talk about lawsuits, leadership missteps, or "Summit sucks water" lawn signs.

Still, he and the team are proud of what they've accomplished—laying down infrastructure at cloud levels was a costly, complicated, and unglamorous feat. The resort also still limits the size of houses and the number of day and season passes the mountain sells, honoring the promise to locals not to overdevelop or turn Powder into just another crowded slope.

In the years since they embarked upon this ambitious project, the founders have started families, moved around, and continued to run the conference business through a global pandemic. Rumors swirl about them soon selling what remains of their stake in Powder Mountain, but Bisnow told me that a sale is not imminent. He pointed out, however, that it's not unusual for founders to step back from startups after a few years.

And, he said, it's now up to the board and homeowners to decide whether to move forward with some version of the vision he and his team laid out a decade ago: "Do they want a big town? Or do they just want a quiet mountain community?"

A quiet mountain community is just fine with Netflix's Hastings, he told me in January, when I reached him by Zoom in the 5,500-square-foot wooden home that he and his wife built on Powder Mountain. It was three days before the streaming giant's cofounder was to step down from his longtime role helming the company as co-CEO, and he looked blissed out after a particularly good ski run. "You can see I'm red," the 62-year-old said, grinning and pointing to his cheeks, which were indeed rosy.

In its current iteration, Summit Powder Mountain is no Aspen-like luxe resort, the multibillionaire was eager to explain to me: "It's a hostile environment on the top of the mountain," he said. "The electricity goes out. In a huge storm, you're locked up here." High winds, raccoons, and crows (not to mention roaming black bears and mountain lions) mean residents—even billionaires—have to haul their garbage to a dumpster. The vibe is "pioneer," Hastings says, and "the après-ski scene is near zero. We all just do potlucks."

"We're super happy," Hastings said. "But we signed up for the wilderness."

The nascent community that's emerging on Powder Mountain is less utopian, perhaps, than the high-minded vision articulated a decade ago. The project has morphed into something less ambitious but more pragmatic.

That feels appropriate. The "everything bubble" has popped, and the unbounded ambition of the tech industry seems to be finally hitting a wall. The euphoric era that gave rise to Summit Series and to the original Powder Mountain plan, in which moonshot idealism and good vibes felt more important than a solid business plan, is over—and, honestly, good riddance.

The pendulum will swing back to overexuberance and magical thinking, as it always does. More dreamlands will be built. (Recently, Tesla CEO Elon Musk announced plans for a "Texas Utopia" near Austin.) In the meantime, this partially built-out, mostly stalled ski resort feels almost too on-the-nose as a metaphor—and as a cautionary tale. It's a 9,000-foot monument to the hubris of Silicon Valley's big ideas.

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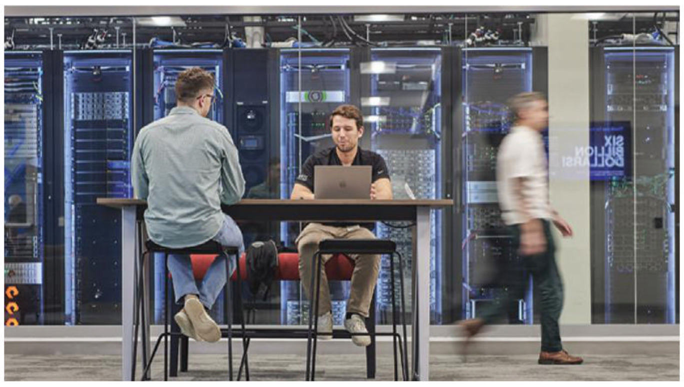

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THE PACE OF CONSUMER ENGAGEMENT WITH DIGITAL PAYMENTS is increasing rapidly. This year, 66% of Americans expect to use digital wallets, based on a 2023 Mobey Forum report. Recent PwC findings anticipate that 80% of all global payments will be digital by 2025, and according to a Deloitte report, global digital payment transactions are expected to reach $11.3 trillion in 2026.

But it's not enough to merely meet today's demand for digital payment solutions. Consumer needs are evolving quickly, and businesses must predict the future of the commerce landscape and innovate their digital payment solutions accordingly.

"Consumer demand is driving change," says Rob Cameron, global head of Acceptance Solutions at Visa. "The pandemic accelerated growth toward digital commerce experiences. Where businesses once treated payments as an afterthought, savvy businesses have now come to realize that payment processes must be prioritized. More importantly, they should help drive and influence all other technologies and processes that run companies' operations."

As digital innovations increasingly evolve, one thing remains constant: People want simplicity and security during every step of their payment processes. To successfully navigate the payments industry, businesses will need to stay informed on emerging technologies that enable faster and safer systems.

Organizations that prioritize a digital transformation will benefit in the long term, says Jodie Kelley, CEO of Electronic Transactions Association: "Businesses that adapt will experience increased revenue, improved customer service capabilities, and will be poised to take advantage of future innovations that make life easier for companies and consumers alike."

Consumers are very discerning when it comes to payments, and businesses that don't focus on payment innovation risk losing sales and frustrating customers. "The ease, speed, convenience, security, and number of payment options have all increased," says Kelley. "Businesses must consistently anticipate where customers are going to be and meet them there."

Leading companies are staying one step ahead of consumer demands by partnering with payment solutions providers, which can increase systematic efficiencies and decrease operating expenses. According to Cameron, Visa Acceptance Solutions has become a payment orchestration hub—connecting merchants to a range of providers around the world.

"We architect global acceptance solutions that help people, businesses, and economies thrive," says Cameron. "We provide all industry players with the ultimate flexibility in creating a solution that works for them while helping them connect with virtually any solution provider they need for their businesses—banking, software, or otherwise. And we are seeing more opportunity than ever." ■

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THE EVER-CHANGING WORKING WORLD

By Megan Leonhardt

For many Americans, work looks and feels very different these days.

Since the COVID-19 pandemic proved that all work doesn't need to be done at the office, employees are openly questioning the "why" and "how" driving workplace norms, says Lynda Gratton, a professor of management practice at London Business School.

"We never really designed work. We just had a norm that everybody was in the office, and we sort of muddled through, and it was fine," Gratton says. "But now we [are] actually intentionally designing" how we work.

The best companies understand this dynamic and are actively shifting their strategies in a variety of ways—from physically changing office layouts to offering flexible scheduling options to ensuring greater equity in who gets to take advantage of opportunities for advancement. "There's a whole set of reimaginings going on right now," Gratton says.

THE CHANGING WORKPLACE

FOR SOME EMPLOYEES, their workstation is a laptop at the kitchen table. But other workers want and need to be at their employer's office, either because their job requires it or they find it to be more productive.

That presents challenges for companies that want to offer flexibility in order to stay competitive in their recruitment and retention of workers, while also maximizing the returns on their real estate expenses.

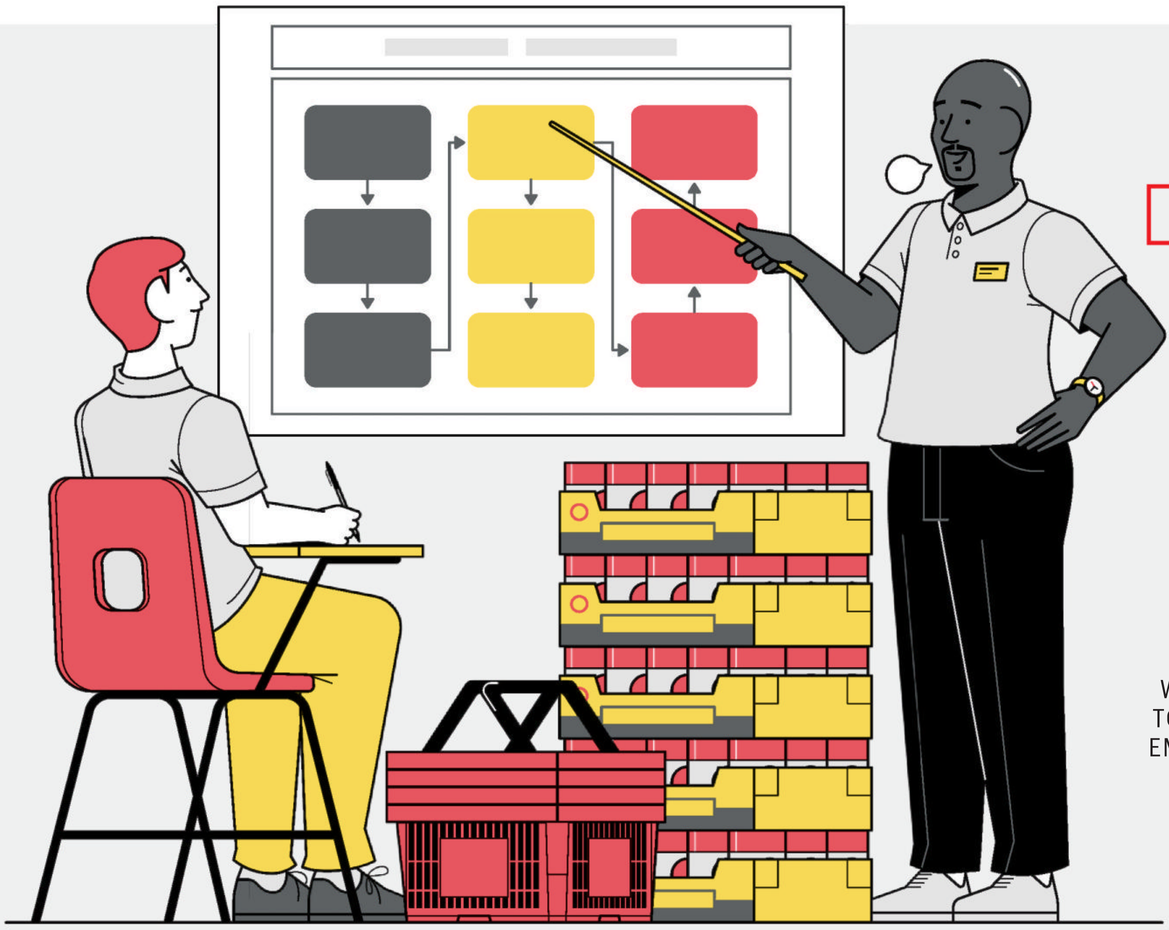
Companies like American Express (No. 3)—which in 2022 introduced Amex Flex, providing formal hybrid, remote,

BY THE NUMBERS

96
OF THE 100 BEST COMPANIES PROVIDE REMOTE WORK OPTIONS

17
COMPANIES COVER 100% OF HEALTH CARE PREMIUMS ON AT LEAST ONE OF THEIR PLANS

22
COMPANIES OFFER AN UNLIMITED NUMBER OF FREE MENTAL HEALTH SESSIONS (MOST OF THEM VIRTUAL) TO EMPLOYEES



BY THE NUMBERS

47%
OF NEW HIRES LIVE MORE THAN TWO HOURS AWAY FROM A PHYSICAL ATLASSIAN OFFICE

$135 MILLION
IN SCHOLARSHIPS WEGMANS HAS GIVEN TO MORE THAN 44,000 EMPLOYEES SINCE 1984

and in-person work models—report employees are using offices differently than before the pandemic. Instead of requiring all employees work in person, Amex's approach gives workers the option to come to the office when there's true purpose, whether that's to collaborate with coworkers, meet new colleagues, or build relationships across teams. This flexibility helps businesses too: Research has found that remote work can boost productivity.

"We have to be much more intentional," Gratton says. "If you want people to be in the office, they have to do things that are really about cooperation—where being in the office is worthwhile."

Many of the best companies are rethinking the physical office space as well. Marriott (No. 10) opened its new headquarters in Bethesda, Md., last summer with about 25% fewer individual workstations in an effort to create more collaborative spaces. The new office design is intended to feel more like a hotel, with designated areas—including a plaza, a café, and parts of the lobby—open to the public.

Salesforce (No. 8) kept its neurodivergent workers top of mind when designing floors of its new Salesforce Tower Chicago. There are a variety of workspaces, including focus pods and quieter places, for employees who face challenges working in more crowded environments. Across the board, the company is increasing collaboration spaces in its office design and experimenting with how floor plans transition from quieter to more active spaces.

THE CHANGING WORKFORCE

IT'S NOT JUST the office that is changing, the workforce itself is shifting. The best companies are moving the needle on creating a diverse and equitable workplace. They know this not only helps with recruiting and retention, but it also increases productivity and ensures organizations stay competitive.

Cisco (No. 1) continues to work toward improving workforce diversity. It increased the number of employees self-identifying as African American or Black overall from 5.9% in fiscal year 2020 to 10% in FY22.

Since 2000, the company has achieved a 60% increase in African American and Black employees in entry-level through manager roles, and a 94% increase in representation at the director level. The number of African American and Black employees within the vice president and C-suite ranks grew by 160% during the last fiscal year.

Diversity, however, goes beyond race and ethnicity. Since the onset of the pandemic, the best companies aren't necessarily looking for candidates who meet a certain set of requirements, such as attending specific schools or earning specific degrees. Instead, there's more of a focus on the skills workers bring to the table.

That's true of Accenture (No. 5), which has been working to reduce its degree requirements. Only 26% of Accenture's software QA engineer postings, for example, specify a degree requirement, according to 2022 research by *Harvard Business Review* and Emsi Burning Glass.

A lot of companies are now recognizing that denying someone a job because they don't have a degree is hurting social mobility, Gratton says. Focusing on a skills-based hiring approach broadens the talent pool immensely.

THE CHANGING WORLD

THE NEAR-CONSTANT change of the past three years has been difficult for pretty much everyone—and companies are working to address the social issues impacting their employees. Marriott's new headquar-

Research: Scott DeCarlo **With additional reporting by** Alicia Adamczyk, Chloe Berger, Alena Botros, Lucy Brewster, Paolo Confino, Kinsey Crowley, Eric Danton, Andrea Guzman, Chris Morris, Prarthana Prakash, Jane Thier, Ben Weiss, and Trey Williams

ters offers a childcare center in an effort to help working parents. Nvidia (No. 6) started offering access to the digital health care app Peppy, connecting employees and their domestic partners and spouses with personalized support for menopause, as well as endometriosis and PCOS. And Hilton (No. 2) now offers free counseling to its employees and access to an internal hub with resources meant to normalize mental health conversations.

Yet this momentum is at a crossroads. Many organizations have announced layoffs and hiring freezes amid the uncertain economic outlook: In the tech sector alone, more than 150,000 workers have lost their jobs since the beginning of 2023. Not only do layoffs jeopardize employee programs and workplace perks, but research shows there's a significant job satisfaction and performance decline seen among remaining workers.

The best companies are traditionally known for their strong levels of employee trust. This year's list was created based on feedback from over half a million employees in August 2022—well before layoffs started to hit and potentially threaten to erode the executive-employee relationship. The best companies have survived economic downturns before. Time will tell how their company cultures weather this storm.

1 CISCO

EMPLOYEES ......40,415 JOB OPENINGS......646 YEARS ON THE LIST......26

LIKE MANY TECHNOLOGY companies, Cisco is at an inflection point after cutting roughly 4,800 workers in recent months. Layoffs can hurt even the strongest company culture, but the tech giant—which is in the No. 1 spot for the third year—has built a solid foundation that can help it pull through the recent upheaval. Cisco's inclusive workplace is built on a strong sense of purpose that comes through in projects like its ESG Reporting Hub, where it has been publicly detailing progress on its environmental, social, and governance (ESG) initiatives since 2005. Amanda Cumberland, director of ESG strategy and reporting, recently wrote about how proud she is of the difference Cisco makes: "We don't have it all figured out yet, but we want to keep learning and doing more." (See our interview with CEO Chuck Robbins in this issue.)

Great Place To Work®

METHODOLOGY *Fortune* partners each year with people analytics firm Great Place to Work to determine the Fortune 100 Best Companies to Work For list. For the complete methodology go to *fortune.com/franchise-list-page/best-companies-2023-methodology.*

CONTRIBUTORS from Great Place to Work include CEO Michael C. Bush, Roula Amire, Nancy Cesena, Zachary D'Amato, Sarah Lewis-Kulin, Kristyn Lukjan, Devyani Mahajan, Travis Minetti, Kim Peters, and Otto Zell

2 HILTON

EMPLOYEES.................42,676
JOB OPENINGS............. 3,476
YEARS ON THE LIST 8

The hospitality company has built its employee experience around improving professional growth and inclusion, committing itself to reach global gender parity and 25% ethnic diversity in corporate leadership by 2027.

3 AMERICAN EXPRESS

EMPLOYEES 26,000
JOB OPENINGS................898
YEARS ON THE LIST 23

For the second year, Amex achieved 100% pay equity across genders globally, and across race in the U.S. It also increased the number of employees who are eligible for company stock options and expanded mental health benefits.

4 WEGMANS

●

EMPLOYEES 53,252
JOB OPENINGS............. 1,912
YEARS ON THE LIST 26

Wegmans employs over 53,000 workers and maintains a $15 minimum wage. Employees laud the privately owned company for its intensive training program and commitment to flexible scheduling.

5 ACCENTURE

●

EMPLOYEES................65,000
JOB OPENINGS.............. 700
YEARS ON THE LIST 15

Accenture laid off 19,000 workers worldwide (about 3% of its workforce) in late March 2023. It has focused on widening its talent pool by investing in a paid apprenticeship program with 1,200 participants in North America.

6 NVIDIA

●

EMPLOYEES 12,771
JOB OPENINGS................357
YEARS ON THE LIST 8

The technology company has increased its focus on recruiting diverse talent in an attempt to create a more inclusive workplace, including implementing a new global allyship program.

7 ATLASSIAN

●

EMPLOYEES .... 4,000+
JOB OPENINGS................ 64
YEARS ON THE LIST 5

As a leading provider of collaboration software, it's not surprising Atlassian embraces flexibility. There's no in-office work expectation, and employees aren't required to stick to a traditional nine-to-five schedule.

8 SALESFORCE

●

EMPLOYEES................79,000
JOB OPENINGS................ 247
YEARS ON THE LIST 15

Salesforce has a reputation for its unique company culture. Employees have the opportunity to offer feedback in a public Slack channel read by senior leadership. Still, it has not been immune to the economic downturn, laying off 8,000 workers since December 2022.

9 COMCAST NBCUNIVERSAL

●

EMPLOYEES 130,000
JOB OPENINGS........... 11,000
YEARS ON THE LIST 6

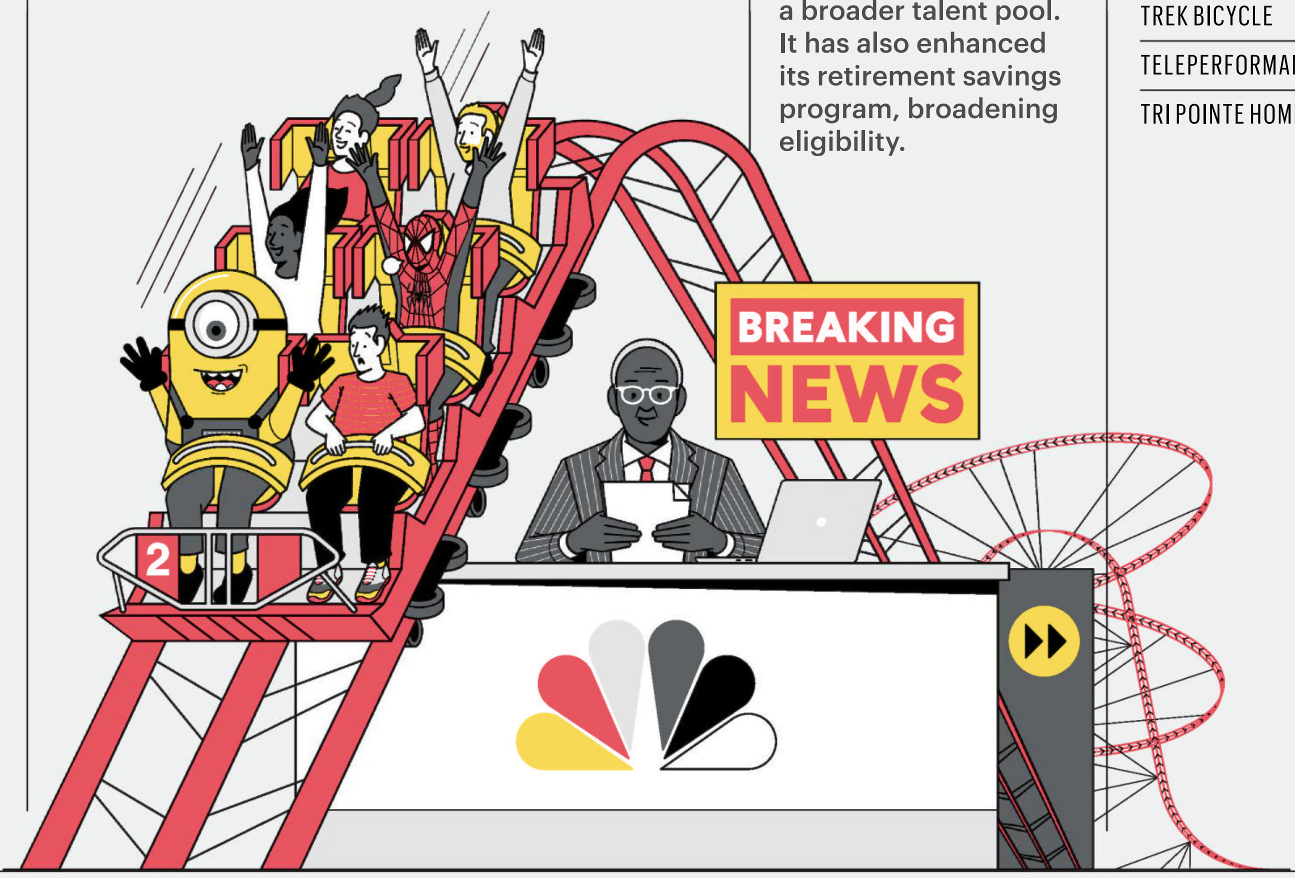
AT COMCAST, parent company of NBCUniversal, leadership is focused on a goal of attracting and retaining 33% people of color and 50% women at all leadership levels. NBCU Academy, launched in 2021, provides underrepresented communities a pipeline into newsrooms with job training and education on the fundamentals of journalism.

10 MARRIOTT

●

EMPLOYEES 109,405
JOB OPENINGS............ 5,955
YEARS ON THE LIST 26

With an eye toward inclusivity and diversity, Marriott rolled out part-time management positions, which the company says allow it to tap into a broader talent pool. It has also enhanced its retirement savings program, broadening eligibility.



10 NEW COMPANIES ON THE LIST

Work is always changing and so is the selection of businesses that make *Fortune*'s annual Best Companies to Work For list. This year, there were 10 new companies joining the ranks thanks to their commitment to their employees.

Company Name	Rank
VISA	49
METLIFE	51
THE BREAKERS PALM BEACH	65
QUALTRICS	68
ALLY FINANCIAL	71
DISCOVER FINANCIAL SERVICES	81
VERTEX PHARMACEUTICALS	84
TREK BICYCLE	94
TELEPERFORMANCE	97
TRI POINTE HOMES	99

WANT MORE OF THE BEST?

Find full company profiles on every 100 Best winner at *fortune.com*.

KEY TO SECTORS

- ● AEROSPACE & DEFENSE
- ● BUSINESS SERVICES
- ● CHEMICALS
- ● ENERGY
- ● ENGINEERING & CONSTRUCTION
- ● FINANCIALS
- ● FOOD & DRUG STORES
- ● HEALTH CARE
- ● HOSPITALITY
- ● TECHNOLOGY
- ● RETAILING
- ● TELECOMMUNICATIONS
- ● TRANSPORTATION
- ● WHOLESALERS

NOTES: NUMBERS ON THIS LIST ARE U.S.-ONLY UNLESS OTHERWISE INDICATED. N.A.: NOT AVAILABLE

RANK	COMPANY NAME	# EMPLOYEES	# OPENINGS	YEARS ON LIST	SECTOR
11	ROCKET COMPANIES	18,500	224	20	●
12	SLALOM	11,500	N.A.	8	●
13	POWER HOME REMODELING	3,369	250	6	●
14	INTUIT	13,261	180+	22	●
15	CAPITAL ONE FINANCIAL	48,869	865	17	●
16	PLANTE MORAN	3,503	268	25	●
17	DELOITTE	80,138	2,396	24	●
18	ORRICK	1,975	17	10	●
19	WORLD WIDE TECHNOLOGY	7,727	335	12	●
20	SYNCHRONY FINANCIAL	18,500*	185	6	●
21	NATIONWIDE	25,000	870	9	●
22	DAVID WEEKLEY HOMES	1,547	125	17	●
23	BAIRD	4,899	137	20	●
24	PINNACLE FINANCIAL PARTNERS	3,248	251	7	●
25	PROTIVITI	4,914	230	9	●
26	TARGET	450,000	8,840	3	●
27	BOX	1,812	26	4	●
28	KIMLEY-HORN AND ASSOCIATES	6,983	1,074	16	●
29	VETERANS UNITED HOME LOANS	4,880	183	8	●
30	PRICEWATERHOUSECOOPERS	65,000	N.A.	19	●
31	ADOBE	14,600	200	23	●
32	HEWLETT PACKARD ENTERPRISE	15,000	800	2	●
33	CAMDEN PROPERTY TRUST	1,631	101	16	●
34	CREDIT ACCEPTANCE	2,243	62	9	●
35	CADENCE DESIGN SYSTEMS	3,390	168	9	●
36	PULTEGROUP	6,100	160	3	●
37	KIMPTON HOTELS & RESTAURANTS	4,962	1,148	14	●
38	KPMG	39,556	1,440	16	●
39	PERKINS COIE	2,619	20	21	●
40	WORKIVA	1,907	99	5	●
41	MODERN TECHNOLOGY SOLUTIONS	1,721	278	2	●
42	RSM US	13,596	1,000	3	●
43	NEW AMERICAN FUNDING	3,455	71	2	●
44	BAIN & CO.	14,224*	64	5	●
45	VIZIENT	4,638	218	2	●
46	ALSTON & BIRD	1,596	46	24	●
47	THE CHEESECAKE FACTORY	42,759	2,210	10	●
48	HUBSPOT	4,142	N.A.	4	●
49	VISA	12,651	325	1	●
50	EY	54,000	900+	25	●
51	METLIFE	14,597	415	1	●
52	SAP AMERICA	25,808	302	7	●
53	NAVY FEDERAL CREDIT UNION	23,087	777	13	●
54	PROGRESSIVE	55,723	527	6	●
55	TOTAL QUALITY LOGISTICS	9,213	305	3	●
56	RYAN	2,500	103	7	●
57	ELEVANCE HEALTH	80,124	6,037	3	●
58	SHEETZ	24,444	1,331	9	●
59	FIRST AMERICAN FINANCIAL	12,255	284	8	●
60	CROWE	5,146	690	5	●
61	BAPTIST HEALTH SOUTH FLORIDA	27,032	2,175	23	●
62	EDWARD JONES	52,598	1,970	24	●
63	BANK OF AMERICA	171,057	6,579	5	●
64	ROBERT HALF INTERNATIONAL	6,460	N.A.	2	●
65	THE BREAKERS PALM BEACH	2,300	114	1	●
66	TEXAS HEALTH RESOURCES	28,533	1,807	9	●
67	RED HAT	7,985	165	5	●
68	QUALTRICS	4,000	71	1	●
69	HORIZON THERAPEUTICS	1,808	89	3	●
70	MUTUAL OF OMAHA	6,100	156	2	●
71	ALLY FINANCIAL	11,600	500	1	●
72	BLUE SHIELD OF CALIFORNIA	7,302	193	2	●
73	ALTAR'D STATE	2,700	255	2	●
74	SERVICENOW	10,960	442	3	●
75	W.W. GRAINGER	19,710	1,836	6	●
76	HYATT HOTELS	43,820	3,589	10	●
77	TANIUM	1,462	35	2	●
78	STRYKER	25,808	1,000	13	●
79	ABBVIE	26,035	1,273	6	●
80	HP	N.A.	N.A.	6	●
81	DISCOVER FINANCIAL SERVICES	20,200	388	1	●
82	EXPERIAN	6,510	211	4	●
83	PANDA RESTAURANT GROUP	50,061	3,895	2	●
84	VERTEX PHARMACEUTICALS	3,867	318	1	●
85	CARMAX	30,000	1,300	19	●
86	HILTI	3,558	172	3	●
87	HILCORP ENERGY	2,891	37	9	●
88	DHL EXPRESS U.S.	7,500	N.A.	3	●
89	DOW	N.A.	N.A.	3	●
90	PCL CONSTRUCTION ENTERPRISES	1,640	333	13	●
91	PUBLIX SUPER MARKETS	243,306	7,528	26	●
92	BRIGHTVIEW SENIOR LIVING	5,311	388	2	●
93	MASTERCARD	9,036	189	2	●
94	TREK BICYCLE	3,718	117	1	●
95	SCRIPPS HEALTH	17,211	1,129	15	●
96	NUSTAR ENERGY	1,130	31	13	●
97	TELEPERFORMANCE	19,700	7,160	1	●
98	MERCK	27,731	1,963	9	●
99	TRI POINTE HOMES	1,332	17	1	●
100	CROWDSTRIKE HOLDINGS	4,374	132	3	●

KEY TO SECTORS

- ● AEROSPACE & DEFENSE
- ● BUSINESS SERVICES
- ● CHEMICALS
- ● ENERGY
- ● ENGINEERING & CONSTRUCTION
- ● FINANCIALS
- ● FOOD & DRUG STORES
- ● HEALTH CARE
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LEADING THE ‘BEST COMPANY’ THROUGH THE ‘WORST THING’

Cisco is *Fortune’s* Best Company to Work For for the third consecutive year. CEO **Chuck Robbins** says clear communication is one reason for the top ranking. Cisco aims for honesty and transparency even when delivering tough news, like recent layoffs.

By Susie Gharib

Additional reporting by **Megan Leonhardt**

WHAT DOES it take to run the Best Company to Work For? Ask Chuck Robbins, CEO of Cisco Systems, and you will get a pretty standard answer: Communication is key.

“We communicate very honestly, openly, transparently, and authentically,” he says. “And we talk to our employees about any of the issues that they want to talk about. [That’s] really important today because employees want to work for human beings.”

That may sound like a common C-suite spiel, but when Cisco workers reviewed their employer, they too cited communication as one of the tech giant’s top traits. An internal platform called Team Space lets individuals and teams collaborate and ask questions of company leaders. An event series called Cisco Check-Ins attracted 59,000 unique employee views across 13 events during the company’s last fiscal year. During the check-in sessions, leaders share information about employee relations concerns, and workers give feedback on what’s working—and what’s not.

Those forums, along with Cisco’s sustainability efforts, mental health resources, internal hiring, and community outreach, landed the San Francisco–based tech giant that sells networking and telecom hardware at No. 1 on *Fortune*’s Best Companies to Work For list for the third straight year.

“Employees today care deeply about what the organization they work for stands for. They care about our purpose and what we believe in. And our purpose as a company is to power an inclusive future for all,” says Robbins.

Fortune’s list is based on employee surveys conducted in mid-2022. Since then, Cisco, like so many of its tech industry peers, initiated layoffs, reducing its headcount by approximately 5%, or around 4,800. Can a company that lays off workers still be considered a top employer? Robbins argues that even the best businesses have to make difficult decisions. They can still do good by their employees by making sure those tough choices are communicated clearly and carried out thoughtfully.

“Nobody likes it. I don’t like it. It’s the worst thing we ever have to do,” Robbins says of job cuts. The point of Cisco’s layoffs was to reallocate resources to areas of growth, and Robbins says the company tried its best to redeploy workers to “areas we wanted to invest in” before slashing positions. “Our employees really appreciated that,” he says. What do you say to the people that were laid off? “We were just honest about why we had to do it.”

ROBBINS, 57, became Cisco CEO in 2015, when the company was arguably best known for its Internet routers and switches, office phone networks, and WebEx video chat platform. Robbins has steered Cisco toward growing areas like cybersecurity and the Internet of Things.

In its most recent earnings for the three-month period ended Jan. 28, Cisco delivered better than expected results and raised its full-year outlook, buoyed by a robust public sector business and easing supply constraints. Quarterly revenue grew 7% year over year to $13.59 billion, though net income fell 7% to $2.77 billion.

Robbins attributes Cisco’s upbeat forecast of 9% to 10.5% revenue growth for this fiscal year, in part, to its ongoing efforts to

PHOTOGRAPH BY **CHRISTOPHER LANE**

CHIEF TALKER
Robbins says CEOs are expected to tackle far more topics now than in the past.

shift its business to more of a recurring model.

"Now, 44% of our revenue is coming from recurring sources like software subscriptions," he says.

Amid economic turmoil, Cisco customers are being more diligent about their tech investments but still "understand the strategic value," Robbins says. "We see some customers who are requiring more signatures, but in general, the signatures come, it just takes a little more time."

ON A MONDAY in March, Robbins tours Cisco's new 58,000-square-foot offices in Manhattan that opened in April 2022. The sleek, smart building is powered by Cisco technology, aims to minimize emissions, and features spaces where workers can collaborate. Robbins is especially proud of the office's automated, energy-saving HVAC system. "If a room is empty for two hours, cooling goes off, and then 15 minutes before the next meeting, it'll crank back up again. A lot of the integration is just really well thought-out," he says.

Despite the lavish space, Cisco is not requiring employees to return to the office, with some exceptions. Some teams with engineers, for instance, are encouraged to come in three days a week.

"I used the phrase once: 'Let's make the office a magnet instead of a mandate,'" Robbins says. "We're really trying to create spaces and environments that employees want to come spend time in and that they feel safe in; where they feel like they can collaborate with their peers; that feel modern." Cisco is planning to refurbish some of its other offices and relocate several of its underutilized offices to areas where they'll get more employee foot traffic.

Perhaps gathering more employees under one roof will foster the kind of communication that Robbins—and Cisco employees—seem to cherish. Robbins recognizes that the issues that come up in the workplace now may be different than what employees and management discussed before.

"We've always been honest, but the [range] of the topics that we're willing to actually talk to our employees about has changed significantly. The number of things in the world that CEOs are expected to speak on has changed very dramatically," he says.

Still, Robbins says he's up for any subject matter directed his way. "I joke with our employees that I'll answer any question you have, if it doesn't put one of us in jail or put the company at risk. I think it's just important to set the tone from the top on how we're going to operate as an organization." F

CHIPOTLE
HOW TO WASH YO
HANDS BEFORE RETURNING TO WO

CAN CHIPOTLE STILL MIX IT UP?

Chipotle has been one of the hottest chain restaurants of the past five years under **CEO Brian Niccol.** Now it wants to double its empire. That will mean working new ingredients into its business recipe—and changing the way thousands of employees do their jobs.

By Phil Wahba

THE GARLIC Guajillo Steak has already been off the market for a few weeks when *Fortune* visits the headquarters of Chipotle Mexican Grill in Newport Beach, Calif. But the so-so performance of the entrée is still nagging at CEO Brian Niccol. "It didn't go off the way we had thought it would," Niccol says with a slight shrug.

Chipotle rolls out "LTOs" (limited-time offers) like the steak two or three times a year, hoping they'll bring in new customers and get existing ones to spend more. Niccol, the author of the burrito chain's stunning turnaround since he became CEO in 2018, is an LTO mastermind—and until now, he'd had a long winning streak. Chipotle went all out promoting the steak (which gets its name from guajillo chili peppers). It partnered with gaming site Roblox to offer free coupons for the dish in the metaverse and gave early access to members of its huge loyalty program.

But customers didn't warm to the steak the way they did to, say, the beloved brisket LTO of 2021. And the reasons why hint at the challenges that Niccol needs to contend with if he wants Chipotle's next five years to be as successful as the last five.

Higher-than-anticipated inflation meant Chipotle wound up charging more for the dish than some customers would pay, Niccol explains. And in a chain-restaurant kitchen—where new employees come and go constantly—the steak was a challenging dish to consistently prepare well. "The combination of a lot of turnover, and then frankly, the amount of inflation that was going on out there," says the 49-year-old Niccol, meant "it just ended up being a little bit harder to execute."

Setbacks have been rare for Niccol, a marketing and branding savant who rose to fame when he turned around Taco Bell. Niccol went on to pull Chipotle back from the abyss after headline-grabbing food safety problems chased customers away in the mid-2010s.

PHOTOGRAPHS BY **MAGGIE SHANNON**

Since 2018, Chipotle's annual sales have risen 77%, to $8.6 billion; annual sales per restaurant have climbed from $1.9 million to $2.8 million, and shares are up nearly 400%.

Today, however, Chipotle is feeling the same heartburn that all restaurants face post-pandemic, as inflation erodes consumers' willingness to dine out. The guajillo bust coincided with a worrying 4% year-over-year drop in customer visits in the fourth quarter of 2022. Chipotle offset the decline, and inflation, by raising prices 11% last year, but that strategy can go only so far.

The human element in the steak stumble points to Chipotle's biggest challenge. Niccol has announced ambitious plans to more than double its restaurant count, from around 3,100 to 7,000, opening between 250 and 300 new locations a year for the next decade-plus. For Chipotle, which already employs 103,000 people in the U.S., that will mean hiring and retaining the equivalent of a small city. But workers are hard to find these days—and labor unrest, an endemic problem at restaurant chains, has touched Chipotle too. The average turnover in fast-casual restaurants is 130%, meaning that a restaurant with 30 staff will need to replace 39 people over the course of a year. At Chipotle, turnover ballooned to almost 200% in 2021, though it's now far lower.

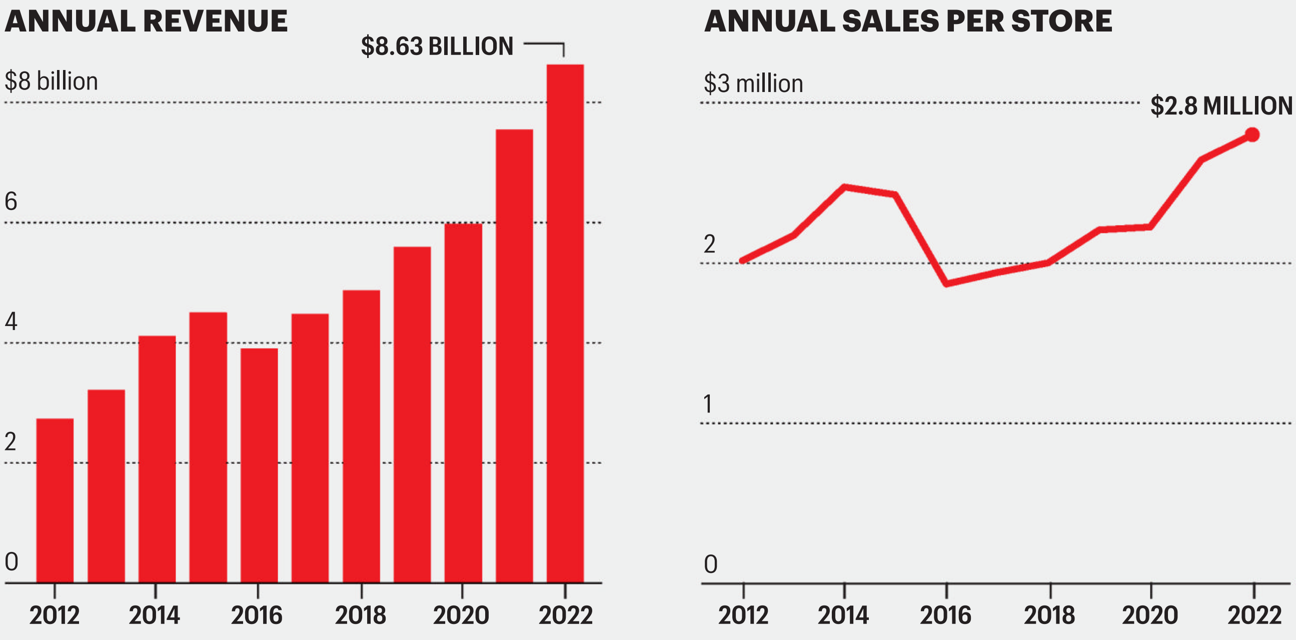
The labor equation is one factor that has some investors skeptical about Niccol's plan. "He's one of the best executives in the space, great pedigree, a smart young guy who makes all the right moves," says Howard Penney, a managing director at Hedgeye Risk Management. But Hedgeye is shorting Chipotle, Penney says, because it doesn't think the chain can sustain its recent pace. "The issue that he faces now is lapping that success," says Penney.

Niccol likes to say that Chipotle has white-tablecloth standards for food preparation: It takes a lot of training to make sure workers do it right. High turnover or undertrained staff can mean compromised quality. So a worker shortage is a potentially existential threat.

Chipotle is tackling that challenge, in part, with a bold move: automating some of the more menial work in its kitchens to make its jobs more attractive. If it automates too much, however, Chipotle could endanger the ethos and theater that have made it successful: the aura of eating handmade food; the pleasure of watching someone scoop *your* grilled chicken into *your* tortilla. Niccol now faces the difficult task of getting that balance of ingredients just right—at increasingly massive scale.

RESTAURANT REBOUND

Chipotle's key metrics have soared since Brian Niccol became CEO in 2018.



ANNUAL REVENUE

ANNUAL SALES PER STORE

SOURCE: COMPANY ANNUAL REPORTS

WHEN NICCOL arrived, Chipotle was a hotter mess than a disintegrating burrito. The chain was struggling to win back customers after a string of food safety incidents, most notably *E. coli* outbreaks in 2015 that sickened dozens of customers and led to the temporary shutdown of more than 40 restaurants. Chipotle went from Wall Street darling to health hazard: The reputational damage was so bad that comparable sales at Chipotle fell 20% year over year in 2016.

Until that point, Chipotle had grown by leaps and bounds since its founding in 1993, thanks to its focus on "Food Integrity"—food made with fresh ingredi-

CORNER-OFFICE FOODIE
Brian Niccol wants diners to have a "culinary" experience. "Guys chopping chicken and people banging pans: You want those sounds, and you want those smells," he says.

ents, in kitchens with no freezers, using only meat from animals free of antibiotics. Chipotle found the sweet spot at the intersection of consumers' love of fast food and their growing desire for what they perceived as healthier fare.

The resulting growth made Chipotle a hot stock for years under founder Steve Ells and his co-CEO, Monty Moran. But it also brought indiscipline, including a lack of consistency in food prep and a disconnect between headquarters and frontline workers. Post–*E. coli* scandal, Chipotle's marketing conveyed an air of desperation: There were $2 taco campaigns, "buy one, get one free" deals, and a constant defensiveness about food safety in its advertising.

Moran resigned as co-CEO at the end of 2016; 15 months later, Ells stepped down to become executive chairman. So eager was Chipotle's board to hire Niccol that it agreed to move its headquarters, and hundreds of jobs, from Denver to Newport Beach—to be closer to neighboring Irvine, where Niccol was running Taco Bell. (Chipotle says Niccol wasn't the sole reason for the move: Multiple fast-casual chains have home offices in the area, deepening its potential talent pool.)

Niccol started his career at Procter & Gamble in 1996, marketing Scope mouthwash. He radically altered the image of Yum Brands' Taco Bell chain as its CEO from 2015 to 2018, winning new customers with the "Live Más" ad campaign, the launch of mobile ordering, and a wave of offbeat but popular new products. The Doritos Locos Taco, a megahit, was Niccol's baby; so was the Cap'n Crunch doughnut hole mashup.

Niccol says he always felt that Chipotle's brand stood for something important in the public's eye. Still, he inherited a company that needed a top-to-bottom recalibration.

One priority was ending tactics like coupons and discounts that could erode Chipotle's brand. "If you're not careful, [discounting] can be a death spiral, where you create a consumer experience around price that's not sustainable," says NPD Group restaurant analyst David Portalatin. Niccol stripped most discounts and promotions off the menu—resisting entreaties from one of his top shareholders, activist investor Bill Ackman. (Ackman, who remains an investor, eventually made a killing on his Chipotle bet.)

Niccol also resisted shareholder pressure to add breakfast, an offering that fueled a turnaround at McDonald's but that would have forced restaurants to operate for much longer hours. Niccol says he got a standing ovation at a conference of 2,000 company managers in 2018 when he announced that Chipotle wouldn't join the Breakfast Wars.

Early on, Niccol hired his Taco Bell colleague Chris Brandt to take over marketing. Much of Brandt's work has focused on Chipotle's loyalty program, which now has 32 million members, ranking alongside Starbucks' as among the most successful such programs in food service. Niccol also prioritized Chipotle's app, which worked to the chain's benefit when restaurants were reduced to takeout or delivery only for weeks during COVID's height.

In advertising, Brandt dropped the defensive tone and refocused Chipotle's campaigns on its fresh ingredients and its "culinary" approach to food prep. (Brandt says internal research shows that Chipotle's safety crises are no longer on people's minds when considering whether to eat there.) Niccol told managers to get frontline employees to think more like chefs; he even gave

PEOPLE NOW, ROBOTS LATER? Workers grill chicken (left) and peel and core avocados (above) at a Chipotle restaurant. The company is seeking to automate those tasks, among others.

them a pocket guide with information on all their ingredients, with details such as how the flavor of a lime changes according to the season.

For Niccol, stressing the culinary approach also meant emphasizing the open-kitchen theater of people preparing food in front of you and allowing you to customize it—something you're more likely to associate with a sit-down restaurant than a quick-serve $10.99 burrito. "There is something to the sights and sounds of Chipotle, hearing the grill and seeing guys chopping chicken and seeing people banging pans," Niccol says. "You want those sounds, and you want those smells.

"I don't think of us as fast food," he continues. "I'm always driving home the point that we are actually a company that does 'culinary' at scale."

● **WHILE GIVING A** tour of a Chipotle kitchen in Costa Mesa, three miles from headquarters, chief restaurant officer Scott Boatwright proudly opens a huge refrigerator to show off the "walk-in" inventory. He says a Chipotle typically goes through the entire contents of a walk-in in three days, rather than the weeks it might take rivals that use frozen food. "We have no freezers, no can openers, no microwaves, so it's as fresh as it gets," he boasts. Employees arrive four hours before a restaurant opens to cut peppers, grate cheese, make guacamole, and generally do the mise en place—prepping ingredients for cooking the way a sit-down restaurant would.

Boatwright also points out that the Costa Mesa restaurant has two separate food-prep workstations—one for pickup digital orders, and the other exclusively for in-restaurant orders. Most Chipotle locations now have this two-tier setup. The idea is to avoid the chaos of workers preparing mobile and in-store orders in the same space, with staff on different timelines bumping into each other. That's a problem that bedevils chains like Starbucks, and one that's easily visible, and off-putting, to in-restaurant customers. Avoiding it means smoother fulfillment of online orders, which now account for a striking 37% of Chipotle's business.

Digital-order workstations also serve an important initiative: the drive-thru "Chipotlane." The company is putting Chipotlanes in 90% of new stores and retrofitting them into many older ones. But they're for online and app purchases only: No barking your order into a defective intercom and hearing back from an employee who sounds like one of the grownups from *Peanuts*. The result, Chipotle says, is shorter lines and shorter waits.

Boatwright's focus on optimal setups reflects his mandate to squeeze more growth out of existing restaurants. While the average Chipotle location generates $2.8 million in annual sales, Boatwright says many locations generate $5 million, and others could get there if they could squeeze in more staff. But that's a tall order in a tight labor market.

This conundrum explains Chipotle's experiments with automation. The chain has begun testing a grill for preparing chicken, of which Chipotle served 86,000 tons last year. Currently, its chicken takes 13 minutes of grilling—and since workers often leave the grill to do other tasks, they sometimes overcook the meat. Niccol says the automated grill will improve quality by standardizing preparation—while sharply cutting cooking time. But for now, that will happen only at online-order workstations: Folks eating in-house will still see imperfect human beings at work at a griddle.

Niccol also hopes to have machines take over the tasks employees say they most dislike—the roles, he says, "that our team members have told us, 'Man, if you could figure out how to make this easier…'" Those include frying tortilla chips (Chipotle is trying out a fryer called the Chippy), coring avocados, and cooking rice.

Niccol bristles at the suggestion that automation is designed simply to reduce the need for humans. He says the tools would essentially just fill positions that see particularly high turnover. Indeed, staying attractive to potential employees is crucial to Chipotle's expansion—and like many restaurants, it's navigating some tense moments on that front.

The average U.S. hourly wage at Chipotle is $16, and its minimum is higher than that of many competitors; it also offers benefits like tuition assistance. But other working conditions have stirred discontent. Last year, Chipotle saw the first successful unionization vote in its history: A restaurant in Lansing, Mich., voted to join the Teamsters, in an election fueled by employees' anger about scheduling and flexibility. The company closed a restaurant in Maine where workers wanted to unionize. (Chipotle said it closed the location because it couldn't staff it adequately.) And Chipotle paid a $20 million settlement to New York last August, after the city alleged that its restaurants failed to post work schedules with enough notice, compensate workers for schedule changes, or give existing employees more shifts before hiring new ones.

Niccol says labor relations are good and that unionization will only hinder them. "It slows down our ability to have a great conversation with people that potentially weren't getting what they needed," he tells *Fortune.*

Above all, Niccol knows that the chain won't hit its goals unless workers not only sign on but stay. He says that in his experience, a restaurant's general manager will almost never work out unless that person was hired and developed in-house. "If I want to open 300 restaurants a year, that means I need 300 new general managers a year," he says. "And I want to do that with a 'promote within' approach." Frontline workers can rise to the highest level of general manager, or Restaurateur in company parlance, in as little as 3.5 years, the company says, earning a compensation package of $100,000 or so.

CASE STUDY

WINS AND WORRIES

As Chipotle's CEO, Brian Niccol has turned around a struggling company—instilling operational discipline, developing a popular app, and increasing sales by 77% over five years. For his next act, he needs to keep growth going despite the challenges of inflation and a tight labor market.

3 BIG WINS

App opportunity Niccol's push to develop an industry-leading app streamlined digital ordering, boosted the company's loyalty program, and made Chipotle a winner during the pandemic when many restaurants were take-out-only for lengthy periods. The app has also made the rollout of its Chipotlanes—drive-thrus reserved for customers who place orders online—a success.

Dining without distress Chipotle implemented more rigorous food-handling measures in the wake of its 2015 *E. coli* outbreaks. Niccol and his team added even more safeguards, and the result has been a clean food-safety record. "We have had nothing in the last five years, knock on wood," says marketing chief Chris Brandt.

Worth the price When Niccol became CEO, Chipotle was stanching a sales bleed and had resorted to cheesy promotions to win customers back. Niccol jettisoned much of the discounting and focused its advertising on quality ingredients. That rebuilt the brand's aura and restored its pricing power.

3 BIG CHALLENGES

Inflation blues Chipotle's pricing power has allowed it to pass on rising food costs and protect its top line. But higher prices in 2022 also contributed to a decline in store visits, mostly from lower-income diners; a sustained decline could torpedo Niccol's plans to more than double the chain's restaurant count.

Restless labor Last year, for the first time in history, a Chipotle restaurant voted to unionize. Complaints about scheduling fueled the organizing drive, and New York fined Chipotle over scheduling practices later in the year. Niccol will need to heal frictions with frontline workers in order to expand the company's talent pool.

Robots on the line? Niccol wants to automate some of the food-prep tasks that workers dislike most, and Chipotle is testing automated tortilla-chip fryers and chicken grills at some restaurants. The machines could help retain employees and boost revenue. But too much automation could be pricey and threaten the "theater" of the food prep, analysts say.

What would it take to keep someone in a chain-restaurant job for that long? Chipotle is betting that the answer involves delegating the crummiest tasks to machines, while sustaining the "you're a chef" cachet of Chipotle's fresh-food ethos.

Increasing efficiency without making restaurants feel robotic: It's a tough recipe to perfect. But that quest is clearly driving Niccol's decisions. Chipotle just rolled out its latest LTO, Chicken al Pastor. It involves fewer steps than the guajillo steak, Niccol notes, and chicken is something Chipotle already makes a lot of. And anything new at Chipotle needs to be operationally simple, he says: "It's got to be something that doesn't slow us down."

CONTENT FROM ALLY FINANCIAL

PROFILE 2023 | 100 BEST COMPANIES TO WORK FOR

A Culture of Care Drives Business Results

Ally Financial builds a different kind of bank through its commitment to support employees.

FIFTEEN YEARS AGO, MOST BANKS looked and felt the same. Company culture was a "nice to have" but not a business driver. Enter Ally Financial in 2008. The nation's first digital-only bank was built on the principle of "doing it right" for its employees and customers. Leaders didn't just strive for another bank—they launched a better one based on a human-centric insight.

"Our culture is founded on a simple formula: When we take care of our employees, they will take care of our customers and communities—and results will follow," says Kathie Patterson, chief human resources officer at Ally. "We recognize that the personal and professional lives of our workforce are no longer separate, and we're all facing external challenges, so we've created a work environment that demonstrates sincerity and care for our teammates."

The Detroit-based company has raised its minimum wage twice in the past two years, provided flexible return-to-office guidance, offered employees an equity stock grant, and doubled down on mental health benefits and professional development to enhance engagement and retention. Consistent communication with teammates throughout their employment journeys is a foundational part of the culture.

"At Ally, we put a premium on open dialogue as a vehicle for education and understanding," explains Patterson. Leadership meets with teammates regularly and uses insights gained from discussions with individuals, teams, and employee resource groups (ERGs) to continually improve the employee experience. For example, Ally responded to feedback from its LGBTQ+ and women's ERGs by expanding mental health benefits to employees and their dependents and household members, ensuring an inclusive approach to coverage.

As Patterson says, these programs are designed to help employees feel a sense of belonging, understanding, and empowerment. Ally's commitment to building a human-centric culture earned the company a spot on the Fortune 100 Best Places to Work list for the first time.

"This award is a testament to Ally's 11,500 teammates who have built and sustained a culture that promotes trust, innovation, and collaboration," says Patterson. "The mission to 'do it right' has allowed us to focus on our customers and to also be there for one another. Our teammates have been very open about what they need to be successful and the support they want from the company. We are their allies and deliver for them during the moments that matter." ■

ALLY'S HUMAN-CENTRIC CULTURE ENCOURAGES EMPLOYEES TO CONNECT, COLLABORATE, AND SUPPORT EACH OTHER.

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For everything we do,
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100 BEST COMPANIES TO WORK FOR® 2023

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ILLUSTRATION BY **CELYN**

THE LIST — 2023

READY FOR A **REBOOT**

A year from hell in crypto has left investors feeling burned. But it also drove weak and scammy firms out of business. **The inaugural Fortune Crypto 40** spotlights the companies that can anchor a strong, enduring blockchain industry.

BY JEFF JOHN ROBERTS

IN MAY 2022, a fraudulent stablecoin project called Terra imploded, setting off a broader meltdown that wiped out more than $1 trillion in cryptocurrency market cap. Inflation and broader market forces scared other investors away from crypto and drove more firms out of business. The rout reached its nadir in November, when the industry's golden child, Sam Bankman-Fried, got arrested for running a Ponzi scheme, triggering ferocious blowback from regulators.

It has truly been a year from hell for crypto. But the headlines obscure a broader story of how the industry has survived—and even grown stronger.

In March, crypto's market cap was over $1 trillion, while Bitcoin traded well above $25,000—both significantly above the highs set during the last big boom for the asset class, in 2017. More important, crypto has matured enormously since then, attracting talented people who have joined longtime blockchain believers to build quality companies. Wall Street CEOs like Goldman Sachs' David Solomon have acknowledged that blockchain-based businesses are here to stay. And even as the current Crypto Winter has flushed away ill-conceived or scammy firms, others are demonstrating they are ready to make real waves in the finance and business worlds. That's why *Fortune* is publishing the inaugural Crypto 40—the newest of our benchmark lists, like the Fortune 500, that recognize the firms that matter most in business.

The Crypto 40 includes eight categories—a recognition that the industry, which was once defined by crypto trading, is now far broader. We honor a wide range of businesses—from VC firms to NFT shops to data companies to decentralized protocols—that have created major enterprises around blockchain technology. Alchemy, for example, provides plug-and-play tools for companies that want to build products and services around Ethereum and other blockchains. Meanwhile, Yuga Labs is spurring the creative economy by giving customers control over the intellectual property tied to popular digital collections like Bored Apes. Together, these 40 firms are building foundations for enduring digital businesses.

The Fortune Crypto 40 also reflects the fact that the industry is no longer made up solely of edgy startups. Indeed, the category called TradFi—crypto lingo for traditional finance—is composed of market mainstays that have innovated with blockchain in surprising ways. For instance, PayPal is integrating its crypto services with the popular Ethereum wallet MetaMask—a move that could introduce millions to decentralized transactions—while Fidelity now lets customers integrate Bitcoin into traditional retirement funds.

To determine the winners, *Fortune* relied on an array of empirical metrics, coupled with surveys of more than 200 financial executives conducted by Researchscape. The results are both impartial and rigorous, yielding a list of companies—and in some cases nonprofit foundations or decentralized collectives—that have large customer bases, solid revenue streams, and respect from their clients and partners. (Further details on the methodology can be found on the next page and online.)

The Crypto 40 also aims to reward transparency and sound business practices—qualities that have too often been lacking in the still-young industry. Some entities that would have ranked higher based solely on metrics slipped on our list because they don't meet high standards of openness. Binance, for instance, is far and away the biggest centralized crypto company when it comes to trading volumes, but it slid in our ranking because of its legal troubles and lack of transparency about its reserves and business operations.

The ranking that follows features some familiar names and some surprising misses. (We anticipate some grumbling; we congratulate the top finishers.) Above all, the Fortune Crypto 40 is another instance of the publication doing what it does best: telling readers about companies that are making an impact in the world of business. ■

Methodology

The Fortune Crypto 40 is the first of its kind.

While there is no shortage of “best of” or “most important” lists, these are typically based on subjective judgments, not rigorous empirical analysis. That’s why we partnered with Rob Stevens, an economist and longtime crypto journalist, to help us develop a methodology to identify the industry’s leading companies, DAOs, and nonprofits.

Some *Fortune* rankings rely primarily on a single metric: Our flagship Fortune 500, for example, ranks companies purely on revenue. But crypto is such a distinct and, well, quirky industry that it felt impossible to make apples-to-apples comparisons between the likes of a major bank like JPMorgan (third in our TradFi category) and a decentralized stablecoin issuer like MakerDAO (third among DeFi contenders).

The result is a list of winners in eight different categories that allow for better comparisons among similar entities, such as venture capital firms and centralized crypto companies. While *Fortune* is not publishing the exact methodologies employed—we’re mindful of future attempts to game the rankings or competitors taking our secret sauce—we’re proud to say we relied on data-driven benchmarks whenever possible. Thanks to the rich public data offered by blockchains, there was often plenty of empirical information to be had, even if many of the potential candidates aren’t public companies and don’t publish traditional balance sheets.

In making the list, we also did our best to be mindful of unsavory actors who, despite being a minority in an industry of mostly honest people, have too often defined the public face of crypto. For this reason, the list was designed to reward entities that have displayed a commitment to transparency and good governance. In some cases, this entailed scoring potential winners on whether they had let others audit their code—as is the case with our DeFi contenders—and in others, it entailed relying on survey data from industry executives who could vouch for reputations. While there is no way to guarantee a rogue actor won’t slip through (recall Enron appeared on the Fortune 500 for years), the guardrails we’ve imposed tilt the scale in favor of honest and law-abiding organizations.

Finally, a list such as this requires expertise and a team effort. For this reason, *Fortune* would like to express gratitude to our partners at Researchscape for the survey assistance; to DL News editor Ekin Genç and data scientist Hildebert Moulié (a.k.a. Hildobby) for their insights; as well as to Nansen, CrunchBase, and Messari for their helpful research tools.

An entity could appear only once on the overall Crypto 40. Additional details can be found at www.fortune.com/crypto-methodology/

By JEFF JOHN ROBERTS,
LEO SCHWARTZ,
MARCO QUIROZ-GUTIERREZ,
and BEN WEISS

CEFI

Coinbase

1

AS OPPOSED TO many early entrants in crypto, CEO and founder Brian Armstrong grew Coinbase through a tried-and-true Silicon Valley method: He joined Y Combinator’s accelerator program, a startup boot camp that also produced Airbnb, DoorDash, and Instacart, and rode that momentum to build Coinbase into one of the world’s premier exchanges.

When Coinbase launched in 2012, customers could only buy and sell Bitcoin. This strategy worked well as Coinbase filled the vacuum left by Mt. Gox, one of the first Bitcoin exchanges, which saw its business suddenly crumble in 2014. But as more tokens appeared, crypto enthusiasts looked elsewhere, and in 2017, when Binance exploded onto the scene, Coinbase lost market share.

It has now expanded the number of tradable coins to more than 200. And in 2021, at a share price over $300, Coinbase went public, becoming the only cryptocurrency exchange to provide U.S. regulators a detailed breakdown of its finances. Its stock has since plummeted, but with a market capitalization over $15 billion, it’s still one of the most valuable companies in crypto.

② Binance

› Binance is the world's largest crypto exchange. Founded in 2017 by Changpeng "CZ" Zhao, a Chinese-born Canadian who got his start on the Tokyo Stock Exchange, Binance became one of the largest cryptocurrency exchanges within one year. But that hasn't shielded Zhao from criticism over his company's opaque operations and lack of financial transparency.

③ Kraken

› Kraken was founded in 2011 by Jesse Powell, an early advocate of Bitcoin who leapt to the aid of Mt. Gox, one of the first crypto exchanges. He steered Kraken to become a fixture of crypto trading, expanding the number of coins offered on the platform from just Bitcoin and Litecoin to over 200. Powell stepped down as CEO last year.

④ Galaxy Digital

› A combination of a digital assets merchant bank and venture capital fund, Galaxy Digital is the brainchild of Michael Novogratz, an on-again, off-again billionaire who won his riches as a hedge fund manager at Goldman Sachs and Fortress. He cofounded the company in 2018 and sees it as a link between the worlds of institutional finance and crypto.

⑤ Circle

› The stablecoin titan was founded in 2013 by Sean Neville and Jeremy Allaire, who's currently CEO. Originally focused on Bitcoin payments, the company joined crypto royalty after partnering with Coinbase in 2018 to develop USDC, an Ethereum-based token pegged to the U.S. dollar.

TRADFI

PayPal

1

PAYPAL, WHOSE EARLY executives included Peter Thiel and Elon Musk, disrupted the existing payments infrastructure soon after its founding in 1998. Through its digital wallet, it removed the headache of having to type in credit or debit card numbers for every online purchase.

Sensing a similar revolution in payments with the advent of blockchain, PayPal has made a clear commitment to crypto, investing in Bitcoin trading, venture funding, and stablecoins. Under CEO Dan Schulman, PayPal made its first big splash in crypto in 2020, announcing that U.S. users would be able to buy, hold, and sell Bitcoin, Ether, Bitcoin Cash, and Litecoin on its payment apps, including Venmo.

The company then expanded its offerings, letting users pay merchants with crypto and partnering with Coinbase to allow those with PayPal–linked debit cards and bank accounts to buy tokens on the exchange. The payments provider also has invested in crypto startups through its venture arm, funding, for example, the development team behind the up-and-coming blockchain Aptos.

② Robinhood

› The youngest company in the traditional finance category—founded in 2013 by former Stanford roommates Vlad Tenev and Baiju Bhatt—the stock-trading firm pitched itself as a trading platform for the 99%. Robinhood saw meteoric growth in the beginning of the pandemic amid the meme-stock craze, later adding a suite of crypto-trading options to its offerings, including a recently released wallet and the ability to buy almost 20 cryptocurrencies.

③ JPMorgan Chase

› Even as CEO Jamie Dimon has publicly denounced Bitcoin, the bank has quietly invested in cryptocurrencies and blockchain technology. Recognizing crypto as a challenge to traditional finance, the firm has spread bets across the nascent industry, funding startups, experimenting with DeFi protocols, and even launching JPM Coin, a stablecoin pegged to the dollar, to facilitate payments among institutional clients.

④ Fidelity

› Founded in 1946, Fidelity Investments may seem like the epitome of legacy finance, but it was the first Wall Street incumbent to plant its flag in crypto trading. In 2018, the firm, one of the nation's largest brokerages, unveiled a platform where institutional clients could trade Bitcoin and Ether. Now, despite heightened regulatory scrutiny and the chill of Crypto Winter, it has expanded its crypto trading platform to include retail investors.

⑤ Visa

› In 1958, the company that was the forerunner to Visa introduced the first general-purpose credit card to Fresno. Now one of the largest payments networks, Visa wants to stay ahead of the technological curve by investing in its own dedicated crypto team and working with dozens of companies to create cards that let customers spend digital currency at local businesses. It also has a consulting arm that's worked with crypto firms through recent industry turmoil.

VC

Polychain Capital

① **FOUNDED BY** the first employee of Coinbase, Olaf Carlson-Wee, Polychain Capital has become one of the top crypto-native venture funds, earning it the lead spot in the VC category of *Fortune*'s Crypto 40.

After he quit Coinbase to launch Polychain in 2016, Carlson-Wee's new fund quickly attracted top investors as partners, including Union Square Ventures, Andreessen Horowitz, and Abstract Ventures' Ramtin Naimi. Those bets paid off, at least initially, as Polychain earned them a 2,303% return in its first full year of operation, after fees, before its performance precipitously dropped in 2018.

Despite subsequent downturns, Carlson-Wee and Polychain have continued with a crypto-first ethos, leading rounds in top projects from Solana to Ava Labs and backing ambitious firms like the climate-focused blockchain Celo. As of early 2022, Polychain had over $6 billion in assets under management.

In October 2022, just a month before the collapse of FTX would plunge the sector into an even deeper bear market, Polychain led a $165 million Series B for the crypto exchange Uniswap, valuing the company at $1.66 billion.

②

Animoca Brands

› With roots in mobile games, Hong Kong–based Animoca Brands has spun into one of the largest Web3 VC firms by pushing a decentralized, creator-focused vision of the internet via portfolio companies. Despite successful exits and a fund valued at nearly $6 billion in mid-2022, it still focuses on declining sectors like the metaverse and play-to-earn gaming. As user interest wanes, Animoca still hopes to redefine what it means to be a gamer.

③

Andreessen Horowitz

› Andreessen Horowitz, a.k.a. a16z and long a preeminent name in Silicon Valley, has a dedicated VC fund focused on crypto built by key figures including entrepreneur Chris Dixon and former U.S. prosecutor Kathryn Haun. While the firm has invested in top crypto companies including Coinbase and Lido, it has drawn criticism for betraying the decentralized promise of blockchain by using its token holdings to exert influence on founders.

④

Pantera Capital

› Pantera Capital was founded by Dan Morehead, a member of the Princeton crypto mafia that includes classmates Joseph Lubin of ConsenSys and Michael Novogratz of Galaxy. Under Morehead, Pantera became a pioneer in the digital asset space: creating the first U.S. blockchain hedge and venture fund in 2013, spearheading the Initial Coin Offering trend, and leading investment rounds in companies such as Unstoppable Domains and Ripio.

⑤

Blockchain Capital

› Founded in 2013, Blockchain Capital invests in both tokens and prominent startups, including Coinbase and Ripple Labs. It launched its fifth fund in July 2021, a $300 million effort with limited partners from the traditional finance space such as PayPal and Visa. Recently, Blockchain Capital has focused on infrastructure and software companies, such as the accounting platform Bitwave and the payroll startup Toku.

NFTs

OpenSea

① **DESPITE A FLURRY** of new competitors since it was founded in 2017, OpenSea has remained the single most important marketplace for non-fungible tokens.

Founders Devin Finzer and Alex Atallah entered the Y Combinator startup accelerator with a different crypto idea in mind but pivoted after the debut of CryptoKitties, one of the first NFT collections.

OpenSea was founded to make peer-to-peer NFT transactions easier via a simple interface at a time when non-fungible tokens were still in their infancy. The marketplace now employs more than 200 and boasts more than 80 million NFTs among 2 million unique collections, including Bored Ape Yacht Club and CryptoPunks.

The company usually charges a 2.5% fee for sales on its platform, but cut that to 0% temporarily while also controversially making creator royalties optional after new competitor Blur made big strides in trading volume.

OpenSea still has the most users, with 317,000 unique traders in February, over 200% more than Blur, according to DappRadar. After a $300 million investment last year led by Paradigm and Coatue, OpenSea was valued at just over $13 billion, up from the company's previous valuation of $1.5 billion in 2021.

② Yuga Labs

› The company behind Bored Ape Yacht Club quickly became one of the biggest names in NFTs. Founded in 2021 by Greg Solano and Wylie Aronow, Yuga Labs is home to other top collections, including CryptoPunks and Mutant Ape Yacht Club. Last year, the sale of 55,000 virtual land deeds, or Otherdeeds, for its Otherside metaverse generated $320 million.

③ Sky Mavis

› After NFT sales plummeted in 2022, Sky Mavis, creator of the blockchain-based game *Axie Infinity*, is striving to be “more aggressive” with tokens and experiments, cofounder Aleksander Leonard Larsen told Bloomberg at a conference in February. *Axie* helped Sky Mavis reach a $3 billion valuation after a $152 million round in 2021.

④ Art Blocks

› Art Blocks is an application-based platform that lets artists publish blockchain-based generative A.I. art that evolves with each mint. One of the platform’s most popular projects is the Fidenza collection by visual artist Tyler Hobbs. The lowest price on OpenSea for one of the 999 abstract NFTs was about 80 Ether (roughly $130,000) in mid-March.

⑤ RTFKT (Nike)

› RTFKT—pronounced “artifact”—was started by Steven Vasilev, Benoit Pagotto, and Chris Le around the start of the pandemic in 2020. A year later, the creator of avatars, online collectibles, and digital sneakers—at the time valued around $33 million—was acquired by Nike for an undisclosed sum.

DATA

Chainalysis

1

CHAINALYSIS PROVIDES essential blockchain data and expertise to government agencies, exchanges, financial institutions, and other customers in 70 countries. The company, created in 2014 by Michael Gronager, a cofounder of crypto exchange Kraken, and University of Oxford–trained economist Jonathan Levin, was valued at $8.6 billion after a $170 million funding round led by GIC. Its software has been used to track illicit activities on the blockchain, including money laundering and terrorism financing.

Customers count on Chainalysis to help prevent losses by identifying illicit activity and potential bad actors, and to help recover stolen funds. The company’s regular reports on suspicious activity on the blockchain also provide vital information to law enforcement: Chainalysis tools were used by the Justice Department to retrieve $2.3 million of the roughly $4.4 million paid by Colonial Pipeline to a Russian cybercriminal group after a ransomware attack. Last year, the company launched a 24/7 “crypto incident response” hotline for customers to get a rapid response following hacks or ransomware attacks.

② Coin Metrics

› Founded in 2017, Coin Metrics provides data and analytics on the crypto market to investors, academics, and researchers. Its products cover real-time prices, exchange flows, and miner revenue. Its Atlas blockchain explorer enables exploring 150 crypto assets and searching for info on transactions, addresses, and blocks. Coin Metrics also publishes newsletters and original research on everything from decentralized exchanges to stablecoins.

③ The Graph

› The Graph is an open-source indexing protocol that allows developers to improve decentralized applications by giving them access to searchable data from the blockchain. It also allows developers to create “subgraphs”—collections of data—as well as use subgraphs created by others. Volunteer data processors called curators, indexers, and delegators stake—or temporarily lock up—GPT, The Graph’s native crypto token, to earn network fees.

④ Dune

› Dune is an open-source platform created in 2018. Originally known as Dune Analytics, it hosts community-made dashboards with data from the Ethereum blockchain in addition to layer-2 networks like Polygon, Optimism, and Gnosis Chain. Anyone can use the platform for free and build off other people’s work, creating their own dashboards and visualizations that can help clarify sometimes-hazy blockchain information.

⑤ Messari

› Founded by Ryan Selkis in 2018, Messari provides comprehensive tools and APIs for businesses and developers wanting to stay current with the oft-volatile cryptocurrency markets. The company brings together governance, network, and market data on one platform that’s used by investors. The company’s paid Messari plans give customers access to additional tools and research reports spanning subjects that include DeFi and NFTs.

INFRASTRUCTURE

Ledger

① **IN THE DIGITAL WORLD** of cryptocurrency, Paris-based Ledger is one of the few companies that's made its name from hardware—and a consumer-facing product, at that. Ledger makes wallets, which are used to store the private keys that protect crypto holdings.

Founded in 2014, the company introduced its first wallet, the Nano S, in 2016, and a follow-up Nano X in 2019. The internal design allows users to store different cryptocurrencies and tokens, as well as applications that manage assets—all while remaining reasonably intuitive. In late 2022, Ledger introduced its newest offering: the Ledger Stax, created in collaboration with legendary Apple designer Tony Fadell, who worked on the original iPod. The sleek device shares something else in common with Apple—a high price tag, retailing for $279.

Ledger is hoping to win over crypto-skeptical users with nifty products and consumer-friendly interfaces. The company already has won over investors, raising nearly $500 million from firms like 10T Holdings and Animoca Brands.

②

Genesis Digital Assets

› Not to be confused with the Digital Currency Group lender, Genesis Digital Assets is a Bitcoin-mining operation that takes its name from the term for the first block mined of a new cryptocurrency. Genesis started in 2013, growing mining locations across the U.S. and in the Nordic region. In September 2021, the company raised $431 million in a round led by Paradigm, with a purported focus on renewable energy sources.

③

Bitmain

› One of the biggest names in Bitcoin mining, China-based Bitmain designs ASIC chips, which are fundamental to mining rigs, and operates some of the largest pools, including Antpool, which allow miners to combine resources. Bitmain cofounder Jihan Wu left the company in 2021 to create a spinoff, Bitdeer, as well as the crypto-finance venture firm Matrixport. Bitdeer set up a $250 million fund to buy distressed assets in September.

④

Alchemy

› Alchemy is an infrastructure platform for the Web3 ecosystem, a nebulous term that refers to companies building a decentralized version of the internet. Founded in 2017, Alchemy offers developer tools and cloud computing power for firms trying to build blockchain-based apps. Customers have included *Axie Infinity* and OpenSea. In February 2022, Alchemy raised $200 million in a Series C round that valued the company at $10.2 billion.

⑤

Moonpay

› Moonpay facilitates exchanges among fiat currencies and cryptocurrencies via different payment methods and forms of currency. The company partners with vendors—ranging from Visa to NFT marketplace Magic Eden—on compliance to help manage know-your-customer (KYC) checks, a valuable service in the Wild West of global cryptocurrency flows. Moonpay raised $555 million at a $3.4 billion valuation in 2021.

DEFI

Uniswap Labs

① **SINCE IT LAUNCHED** in 2018, the Uniswap protocol, which pioneered the automated market-maker model to let users swap one crypto for another, has come to be the dominant name in decentralized finance. It's the leading platform for DeFi trading, and, in a sign of its growing influence, Uniswap Labs raised $165 million in funding—the largest ever such raise in DeFi—at the trough of Crypto Winter, with contributions coming from Polychain Capital, Andreessen Horowitz, Paradigm, SV Angel, and Variant. The venture capitalists valued Uniswap at nearly $1.7 billion, a sign investors believe it's built to last.

The protocol's growth has come in part thanks to sound management on the part of Uniswap Labs CEO Hayden Adams, who has prioritized security and usability over exotic products and grow-at-all-cost gimmicks. Uniswap has nonetheless expanded its presence significantly, recently adding NFT trading and the ability for users to trade on Binance's BNB chain.

And in March, the company unveiled its own decentralized wallet—though, in a sign that DeFi is very much a frontier industry, Uniswap faces an uphill battle in persuading Apple to add the wallet to its app store.

② Lido

> Lido is a popular name in the fast-growing DeFi niche known as “staking as a service,” where users pledge tokens to an entity that uses them to help secure a proof-of-stake blockchain. The protocol took off when it developed a twist called “liquid staking” that permits users to obtain a liquid token even though previously they couldn’t withdraw Ether they’d staked.

③ MakerDAO

> MakerDAO is widely viewed as a blue-chip in the field of DeFi—and in the world of crypto more broadly. The protocol popularized algorithmic stablecoins that, by design, cannot be undercollateralized—a recurring problem in the stablecoin world. MakerDAO’s Ethereum-based DAI token has a market cap well over $5 billion.

④ Aave

> Aave, launched in 2018, is another well-established name in the still-young DeFi field. The company is known for automated lending pools and for pioneering the DeFi innovation known as flash loans. Aave has over $5 billion in locked collateral, and it recently branched out beyond Ethereum to other blockchains and launched its own stablecoin.

⑤ Curve

> Launched in 2020 when automated market makers were still relatively new, Curve branded itself a less volatile option partly to cater to stablecoin traders. The protocol had the busiest day in its history due to the recent banking crisis, as more than $7 billion worth of USDC and other tokens were traded.

PROTOCOLS

Ethereum Foundation

1

IN A CATEGORY that heavily weighted developer activity and the total value of currency locked in a blockchain, the Ethereum Foundation was the easy winner. After periods of turmoil following the launch of Ethereum in 2014, both the foundation and its eponymous blockchain have come to embody the best of what decentralized crypto can be.

Ethereum is not the most valuable crypto—the so-called “flippening” with Bitcoin long predicted has never materialized—but it’s the most versatile and the most popular. This is because it’s the first truly programmable blockchain to catch on and because of its rich community that welcomes experiments and partners of all stripes. Ethereum’s stature is also boosted by the role of its genius inventor, Vitalik Buterin, who has offered technical and moral influence at key moments but has for the most part faded gracefully into the background.

Ethereum finished 2022 on a high note after successfully achieving the technological miracle of switching its blockchain to proof of stake, in part thanks to support and guidance from the foundation.

② Bitcoin

> Bitcoin is unique among the Crypto 40 because it’s the only entry not tied to a company, foundation, or other legal entity. And while it doesn’t have a large smart-contract ecosystem like others in this category, it ranks second because of its sheer dominance when it comes to market value and the number of people who use it. Since Satoshi Nakamoto released his creation in 2008, Bitcoin has established itself as the true OG—and it likely will be forever.

③ Polygon Labs

> Polygon Labs was among the first to realize that the Ethereum blockchain needed a complementary network that allowed for faster and cheaper transactions. Since then, Polygon’s builders have made clever use of marketing and their first-mover advantage to make it the go-to sidechain for a slew of high-profile projects, ranging from Reddit avatars to Starbucks rewards. All of this has also helped make its MATIC token a top 10 cryptocurrency.

④ Solana Foundation

> Solana suffered a near-existential blow in late 2022 when its foremost advocate and patron, Sam Bankman-Fried, was exposed as a con man. But despite this setback, Solana’s advocates have continued to build and to burnish the blockchain’s reputation for innovation and creativity. And despite some high-profile technical snafus, including a 20-hour outage in February, Solana has remained popular with both users and developers.

⑤ Offchain Labs (Arbitrum)

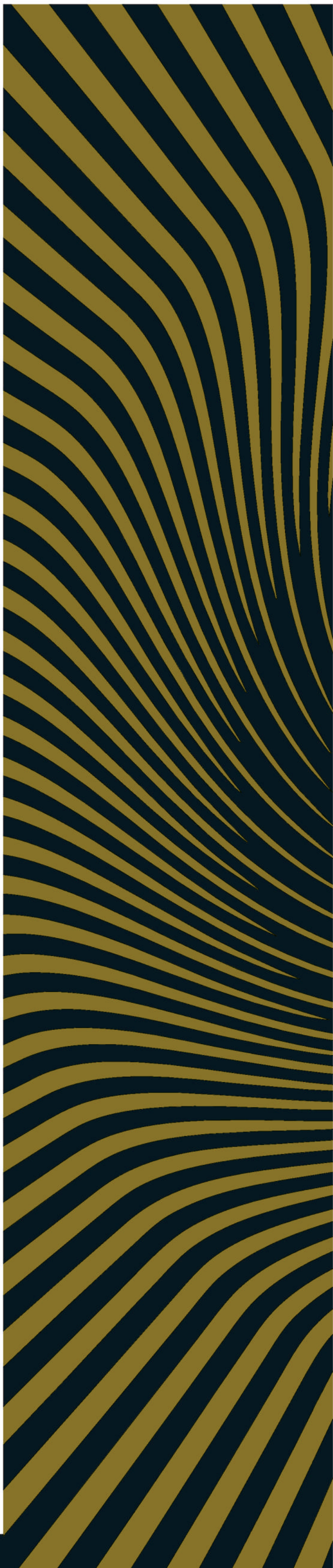
> The third Ethereum-flavored winner in this category, Offchain Labs has emerged as another best-in-breed in the race to find the best solution for blockchain scaling. Its flagship product, Arbitrum, uses the popular Optimistic roll-up technology to make Ethereum more efficient. Its chains—developed by a Princeton professor and two of his students—have won plaudits for their versatility and management.

○ **BINANCE'S FINANCES** — 2023

INSIDE THE **BINANCE** BLACK BOX

Trading exchange Binance is by far the most powerful entity in crypto, but the private company's inner financial workings have remained murky. A *Fortune* investigation shines a light on vast profits, hefty payouts to social media influencers, and a huge hoard of crypto coins that could become its Achilles' heel.

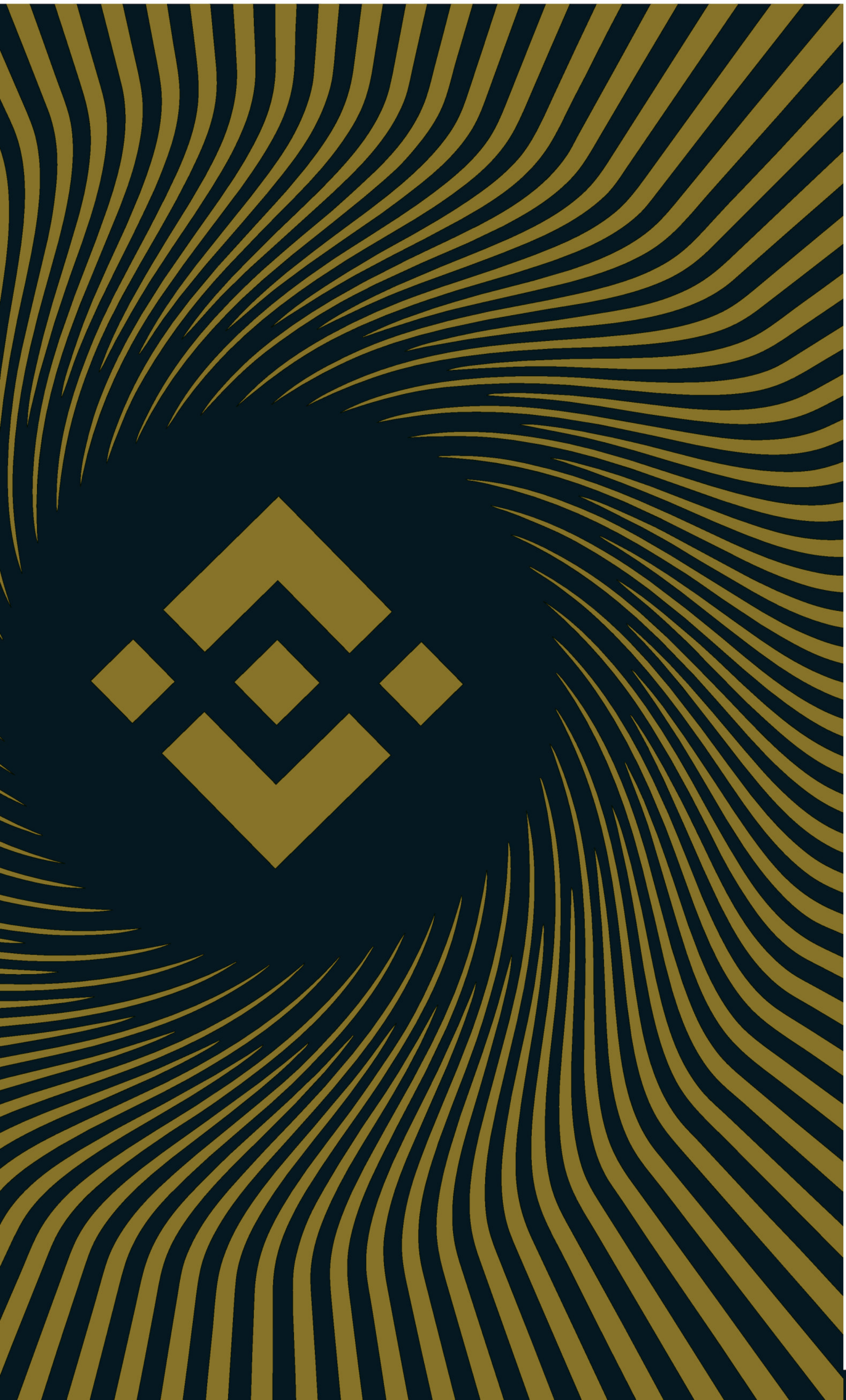
BY SHAWN TULLY



WHEN IT COMES to flamboyant evangelists, it's hard to top Carl Runefelt. The Swedish social media star boasts 4 million followers across YouTube, Twitter, Instagram, and TikTok. He's passionate about the "good life," his 1,001-horsepower Bugatti Veyron, his yacht in Monte Carlo, and his $1 million watch. He even paid to have his face appear on a Formula 2 race car as a high-speed billboard for his brand.

But his true love—even after FTX, even after Bitcoin cratered by two-thirds—is crypto. Over the years, Runefelt, who goes by the Twitter handle TheMoonCarl, has posted a steady stream of QR codes, imploring followers to sign up as his affiliate members and dip their toes into trading on his favorite exchange, Binance. Hey, if this onetime grocery clerk can win a king's ransom betting on crypto, why can't you?

Most casual observers think of Binance, the world's biggest crypto exchange, as a trading-tech titan, a data-driven juggernaut run by the ubiquitous Changpeng Zhao, or CZ for short. But an army of Runefelts—who gain kickbacks with every newbie they sign up—have powered a surprising share of Binance's explosive growth.



This influencer network is largely invisible to those who aren't Binance power-users. That's in contrast to CZ himself, who in recent years has become crypto's most visible spokesman. Zhao has logged countless appearances on cable business networks, released myriad statements touting the health of his business, and appeared at live events worldwide, professing that users' crypto is secure in their Binance accounts.

It's crucial that the cryptoverse believes CZ's assurances, because Binance is its cornerstone. The company has built an empire on low fees and a laissez-faire, all-traders-welcome culture. Over half of all spot and futures trades in crypto run over Binance, according to digital data outfit Arcane Research; Coinalyze, another data provider, estimated that the exchange now handles over 90% of spot Bitcoin transactions. Binance has expanded its dominance even further since the collapse of Sam Bankman-Fried's FTX. As Arcane wrote in a recent report, "Binance *is* the crypto market."

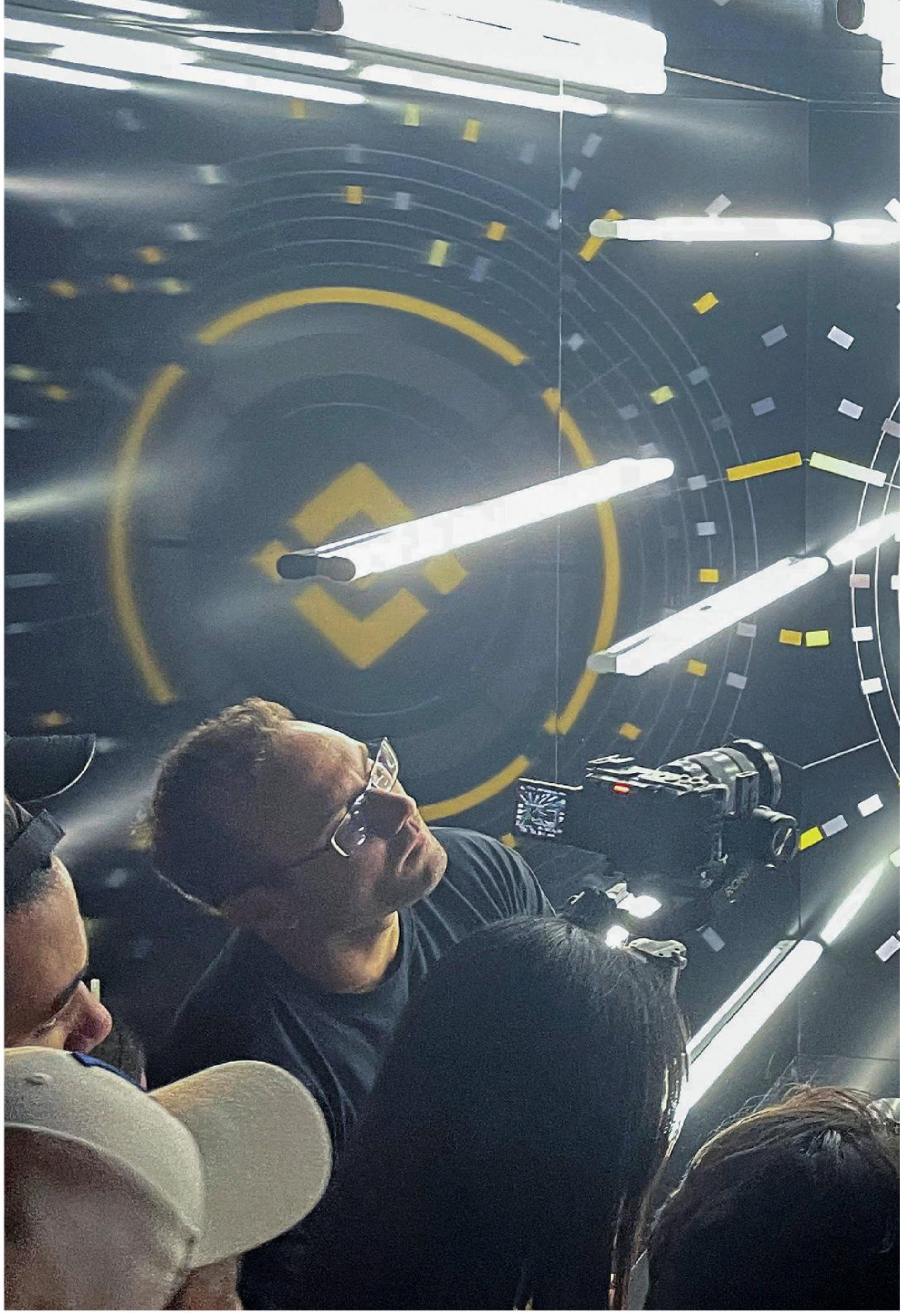
But look under the hood, and things get murky fast. CZ has recently said the company is "still profitable" and has "fairly large cash reserves." But he offers no hard numbers. Binance is a private company and isn't obligated to disclose how much money it makes or how. What's more, Binance's giant global exchange, Binance.com, isn't licensed in the nations that require the toughest public financial disclosures. (In the U.S. Binance has avoided reporting requirements by running a small, relatively limited exchange called Binance.US that's regulated under "money transmitter" licenses in 46 states.)

In the absence of such transparency, we did some digging. Through several weeks of reporting, examination of financial filings, and interviews with investors, *Fortune* assembled a wide-ranging picture of Binance's business.

Some of what we found should give users and investors pause. The exchange's broad edifice includes two surprising and potentially shaky pillars. The first is the Runefeltian world of paid influencers who entice young traders to try crypto—a tactic which, while perfectly legal, is an expensive and erratic way to grow. Second is Binance's reliance on its "native token," the Binance Coin or BNB. Some experts who've studied the company believe that the BNB on its balance sheet accounts for most of its net worth. "The big risk is that Binance may need to turn BNB into fiat currencies that can be used for paying its operating expenses," says Matt Sekerke, an economist at Johns Hopkins. If a crisis forces Binance to sell BNB, its price could collapse, putting the company at risk.

Binance says that neither its recruiting program nor its BNB holdings is central enough to its business model to be a vulnerability. In a written statement, a spokesperson says the affiliate program "represents far too small a portion of our new users" to be thought of as a pillar of its stability. She also says that "the premise ... that Binance will dump (or need to dump) BNB is wrong. We have a very strong balance sheet independent of our BNB holdings." Still, the company declines to be more specific about how big either program is in relation to its business as a whole. And that leaves customers and investors with fodder for some sleepless nights.

Those stakeholders may have bigger things to worry about. In the wake of the FTX collapse, regulators are circling, investigating various allegations about Binance's business ranging from intermingling of customer assets to money laundering. A dramatic regulatory action against the company could certainly clobber any and all of its revenue streams. The ominous climate "doesn't mean that Binance is in danger of a collapse anytime soon," says Mike Alfred, head of hedge fund Alpine Fox and a longtime investor in digital assets and Bitcoin mining ventures. "But it shows that Binance is a much riskier enterprise than its 'crypto bro' customers believe." He adds, "Over time, if a regulatory crackdown doesn't bring it down, an unsustainable model likely will."



CENTER OF ATTENTION
CEO Changpeng Zhao (a.k.a. CZ), shown here at a Binance fifth-anniversary event in Paris, has become crypto's most visible global advocate.

●

BORN IN CHINA, and raised from age 12 in Canada, where he's still a citizen, CZ began his career as a specialist in financial-trading software. He switched gears in 2013 to go all in on crypto, famously selling his apartment to buy Bitcoin, and eventually launching Binance in Hong Kong in 2017. When China cracked down on crypto trading, CZ moved the exchange multiple times, eventually making Dubai its home base. (Binance says it is "in discussions with various jurisdictions about setting up regional hubs/HQs.")

In public forums, CZ, now 45, makes two arguments about Binance's inner workings that are somewhat contradictory. He states that the investing world shouldn't be concerned that Binance does not disclose an official headquarters and answers to no central regulator. But he acknowledges that his industry is experiencing a crisis of confidence, and that to restore trust, exchanges must provide a much fuller picture of their standing. In a November "fireside chat" alongside Mike Novogratz, head of crypto hedge fund Galaxy Digital, for example, CZ asserted that crypto marketplaces should show "financial transparency" and "work closely with

TOM WILSON—REUTERS

regulators and auditors."

Since little or none of that openness currently exists, it takes a careful analysis of Binance's fee schedule and other available sources to estimate its key metrics.

We'll start with overall trading activity. In the past, Binance has put out statistics about its Binance.com transactions. In 2020, it reported $1.4 trillion worth of trades, up from $1 trillion in 2019. Then, in late 2020, crypto prices exploded. Binance rode a moonshot as volume multiplied to a staggering $34 trillion for 2021, a figure cited by CZ in an interview last June.

In 2022, as the crypto market tanked, CZ did a great job taking market share, eliminating fees on some of the most popular trades to siphon sales from Coinbase, Kraken, and other rivals. FTX's demise in November pushed an even bigger share of the world's trades to Binance. For 2022, volumes posted by outside data providers like Arcane and CryptoCompare show that Binance handled around $23 trillion for trades. That was a substantial drop from 2021—but a smaller decline than that posted by its biggest competitors.

What about revenues? CZ has stated that Binance derives roughly 90% of its top line from trading. The rest flows from sources including deposit, withdrawal, and margin lending revenues, and "staking" fees on its native blockchain. Spot trades account for around one-fourth of the trading total, while futures transactions constitute the remainder.

On the spot book, Binance charges a standard commission of 0.1%, or 10 basis points, or bps (one bp equals one-hundredth of 1%). Futures commissions range from just one bp to five bps. On top of those already low fees, Binance grants layer upon layer of discounts. Retail customers get 25% off spot trades and a 10% reduction in futures transactions if they pay the fees using its native BNB coin. Institutional "whales" get extra breaks if they hold lots of BNB.

Binance has never disclosed its revenues. But in January, data firm CryptoQuant reported an estimate of $12 billion for 2022, and Binance published the report on its website, a tacit endorsement. For 2023, daily activity is on par with last year's levels, implying that Binance is again on pace for $12 billion in revenues. That figure may err on the high side, however: The $12 billion rate implies an average commission per trade of around five bps. Binance's commission schedule, and the array of deep discounts it offers, suggest a lower figure.

On the profit front, Binance hasn't always been as secretive as it is now. For the years 2018 through 2020, CZ revealed either precise or approximate annual figures, mostly in blog posts. According to CZ, sales exceeded costs "between $800 million and $1 billion" for 2020. Based on trading volumes, it's likely that Binance's revenues totaled in the low single billions that year, which implies that it generated huge profit margins. And since its volumes multiplied 24-fold from 2020 to 2021, it's highly probable that sales wildly outran costs for tech gear, software, and a payroll that grew from 3,000 to 8,000.

● **FOR BINANCE,** the black box within the black box is its referral program, which incentivizes existing traders to attract new customers. Other marketplace businesses offer such programs, but Binance's grants unusually generous benefits, making it analogous to a multilevel marketing (MLM) platform such as Amway or Herbalife. The recruiters' reward: huge kickbacks based on the commissions those newcomers generate.

Most exchanges, including Coinbase and Kraken, also provide these incentives, as did the *avant-le-déluge* FTX. But according to Joseph Edwards, an investment advisor at London-based crypto firm Enigma Securities, Binance provides by far the most aggressive programs. Edwards believes they're a major part of Binance's growth and component of its expenses. "Binance was behind FTX in spending on the likes of sports sponsorships, but it was far more active and brazen in these retail-focused referral plans," Edwards says.

Binance does plenty of conventional marketing, too: It's a huge soccer sponsor, for example, and last summer it engaged Khaby Lame, the world's most followed TikToker, to promote its blockchain innovations. But the affiliate program gets a huge amount of emphasis, too.

On its website, Binance provides reams of detail on how the arrangements work. The first plan is the Standard Referral Mode, available to all investors. The size of the reward depends on the amount of BNB that the "inviter" holds in a Binance custody account. If the host's wallet has fewer than 500 BNB, he or she collects a 20% kickback on the spot trading commissions generated by anyone they bring to Binance. ("Kickback" is the language Binance often uses on its site.) If a Standard member holds 500 BNB—worth about $170,000, at mid-March prices—that share rises to 40% for spot trades, and 30% for futures.

The bigger plan is the one officially tagged the Affiliate Program, which enlists prominent names in social media. Binance's website provides a list of who's eligible. It includes influencers with over 5,000 followers; financial and opinion leaders with communities of 500-plus members on groups such as Facebook, Reddit, or QQ; analyst-gurus getting over 5,000 daily visits; and crypto funds. The hosts pocket 41% kickbacks on recruits' spot trades if they start with fewer than 500 referrals; at over 500, their take hits a stunning 50%.

Binance provides strong incentives for those hosts to keep building their clubs. To keep the 41% kickbacks, an inviter must attract at least 10 new customers every 90 days that together generate at least the equivalent of 50 Bitcoin, or around $1 million, in new trades.

To entice those recruits to keep trading, the influencers can split their BNB commission discounts with the newbies. That's a particularly big perk in some of the lower-to-middle-income nations where Binance is seeing strong customer growth—Nigeria, say, or Poland, or the Philippines—where new users may be particularly eager for any additional financial boost.

The generosity of the Binance programs is striking compared with those of its competitors. Kraken rebates 20% of the commissions affiliates attract from their invitees. Coinbase pays 50%, but only for the first three months. Thereafter, all fees go to Coinbase. By contrast, once a Binance affiliate lures someone to click on their QR code, that host gets a share of the recruit's spot commissions *forever*.

We don't know how much Binance spends on the affiliate program, or how much it generates in commissions. But Binance provided a hint of the affiliates' importance in October 2019. In a tweet, the exchange revealed that the top earner had made $10.5 million since the program began two years earlier, while the second- and third-best earners had amassed $5 million to $6 million each. And those numbers came before the 2021 crypto boom supercharged demand.

The program itself appears to be perfectly legal, experts tell *Fortune*. Still, it carries liability risks. "A legal problem would arise if the host is falsifying their own qualifications or their own trading record," says Kevin Thompson, an MLM attorney at Thompson Burton in Nashville. "This kind of program creates a compliance burden for the company." The SEC has also targeted crypto firms that work with influencers who don't disclose that they're being paid.

$12 BILLION

Binance's estimated 2022 revenue

○ SOURCE: CRYPTOQUANT

The profligate generosity of the programs could also pose problems by cutting into profits. And anything that might scare the influencers away—another crypto crash, or regulatory action against Binance itself—could shut down this new-customer pipeline.

All those risks are potentially minor, however, if the program is relatively small. Binance says it is, telling *Fortune,* "The program is an important way to bring in new users," but that it wouldn't disrupt the company "if we were to discontinue it (which, it is important to note, we have no plans to do)."

● **THE SECOND SHAKY** element of Binance's business is its reliance on its BNB coin.

Binance created BNB at its launch in July 2017, issuing it through an initial coin offering (ICO) for 200 million tokens. In an August 2019 podcast on the Nomics site, CZ stated that his main goal was to boost the value of BNB. Zhao was voicing one of the core tenets of crypto culture—that people who find a blockchain product useful should profit from its growing popularity. "Equity is a virtual concept inside somebody's head," he said. "Tokenomics, this new way of having a token, is much better … People who think they will trade a lot on Binance will buy the BNB right now; the price will go up because more and more people join.”

As is typical in ICOs, the founders got a big chunk for free. CZ and his team received 40%, or 80 million BNB. Binance sold the public 100 million tokens to raise funds for building the platform and marketing it, and the remaining 20 million went to the firm’s original investors.

Then, as now, BNB’s primary use is as a currency that secures discounts. Only by paying commissions in BNB, or holding lots of it, do customers get breaks on their trades. BNB is also the exclusive coin for “staking” on Binance’s BNB Chain, where customers can fashion smart contracts and NFTs.

As part of its ICO, Binance pledged to gradually purchase and “burn,” or eliminate from circulation, 100 million BNB, or half the number originally minted. The purpose was to get people excited about the coin’s future value, since increasing rarity should keep the price rising. (Burn pledges are common in ICOs.) In mid-2019, CZ made an amazing announcement, declaring that members of the founding team were “giving up” their BNB share and would burn their own coins, getting no compensation. He later added that any additional burns would come only from the company’s holdings.

The strategy appears to have substantially helped boost the price of the native coins. At the time CZ launched the big team burn, BNB traded at around $30. As the broader market took off, the tokens went on one of the greatest tears in the annals of crypto, reaching $670 by November 2021. Even at its late-March price of $337, BNB stands as the world’s fourth-most-valuable crypto coin, sporting a market cap of $53 billion.

The soaring price tracked a shrinking supply. Since June 2019, the founders have erased 24 million of their original 80 million coins—which, at the different times they were burned, had a cumulative value of $4.5 billion. (We know the quantity because CZ has made public the addresses of the “wallets” holding the founders’ coins.)

In a nutshell, the Binance strategy appears to be: boost demand for BNB by offering discounts for transacting with it and holding it; shrink the supply through burns; and collect coins that flow in from trading. At the same time, analysts say, much of Bitcoin’s circulatory system runs on BNB.

50%

Maximum share of recruits’ commissions that an influencer can earn through the Binance Affiliate Program

SOURCE: THE COMPANY

In a 2019 blog post, CZ declared that “our income is mostly in BNB.” The company tells *Fortune*, “We hold BNB and we continue to hold BNB.” Binance deploys some BNB for salaries and bonuses for employees who elect to be paid that way. Still, it appears that the inflow of BNB to Binance is much larger than the outflow.

That tees up an urgent question: How much BNB does Binance hold on its balance sheet? A forensic review of crypto wallets by an anonymous analyst using the Twitter handle @cryptohhipp65 recently concluded that at least 60 million BNB—worth more than $20 billion, at mid-March prices—are sitting in Binance’s war chest. Multiple specialists told *Fortune* that the findings are credible, because the analyst was able to isolate coins held in customers’ accounts and the team’s wallets—meaning that the remaining balance, held in Binance-linked wallets, most likely belongs to the company directly.

The company’s large hoard has implications that could knock Binance off its throne. The intrinsic value of a BNB is real, due to its role in earning discounts and rebates, but it’s modest: The coin’s sky-high market price is largely a testament to faith in CZ. If clients start seeing BNB as grossly inflated, some analysts say, they could dump it. “It would be a kind of bank run where Binance’s custody clients unload their BNB en masse,” says Will Luther, an economist at Florida Atlantic University. A major piece of negative news—a criminal charge against Binance, say, or a big turndown in trading volumes—could conceivably trigger such a run, zapping Binance’s balance sheet. If its other reserves waned, Binance could need to convert BNB into dollars, yen, or euros to pay expenses. If that happened, the coin’s value could plummet, and Binance’s cushion could experience its own burn.

Binance refutes the idea that this could happen. “Binance does not use BNB to cover its operating expenses,” nor will it in the future, the company says, because its balance sheet includes substantial assets other than the coin. Binance did not comment on what share of its balance sheet is made up of BNB, however—and that remains a pivotal issue. If Binance’s reserves are vast and diverse, any risk from BNB is smaller; if reserves are more BNB-centric, the danger is larger. For now, a definitive answer is elusive.

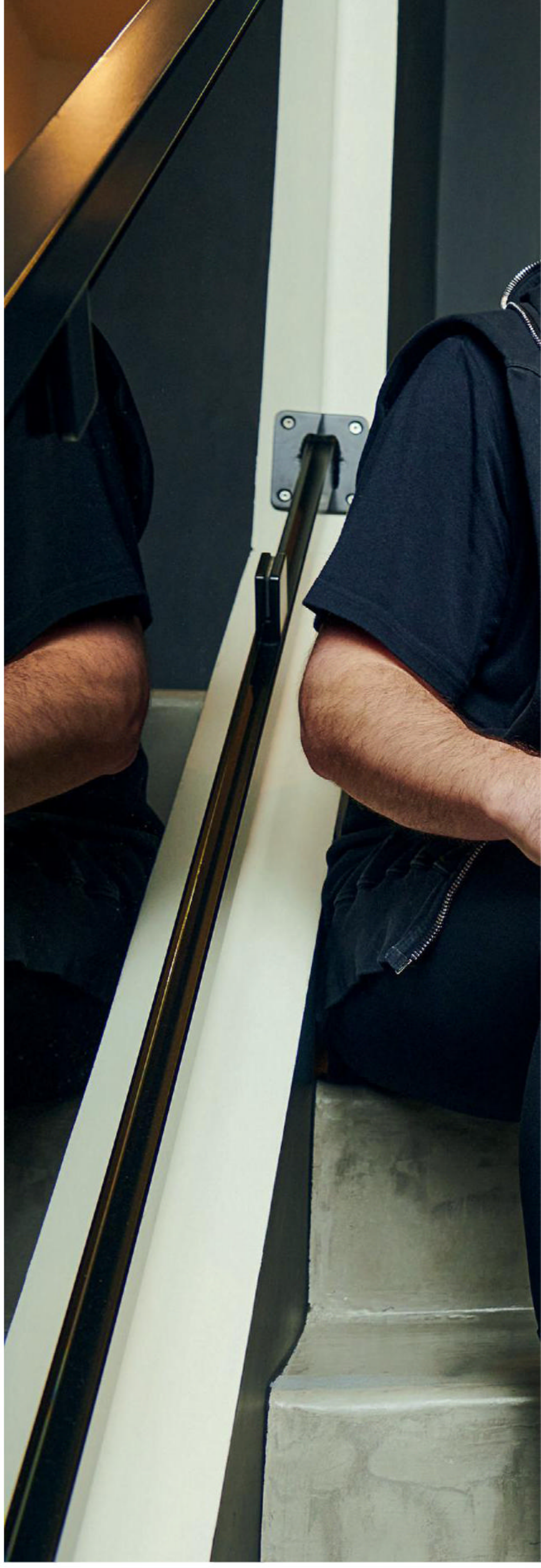
In a sense, the influencer and BNB strategies that have helped power Binance’s rise share one crucial design flaw: They’ve trapped CZ and his team in a box of their own making, where the ripple effects of a crisis of confidence could have an outsize impact. Little wonder that CZ spends so much time talking about Binance’s safety: If customers and investors lose faith, the box could quickly come apart.

FANS AND FUNDS:
WHY NFTs SOUND SWEET TO THESE MUSICIANS

The NFT market has cooled off from its manic highs of early 2022. But Justin "3LAU" Blau and Steve Aoki believe that the blockchain-based tokens can help artists of all kinds build enduring relationships with their fans—and turn music lovers into music investors.

BY JEFF JOHN ROBERTS

PHOTOGRAPH BY **SAEED RAHBARAN**



STEVE AOKI IS RIDING TO NEW YORK CITY in a Sprinter-van tour bus when the Zoom call comes in. The iconic DJ fumbles with his iPhone, brushes back his sweeping black hair, and greets his younger friend and collaborator Justin Blau, a.k.a. 3LAU. The pair are eager to talk about a technology they say will transform the business model of music and redefine the relationship between artists and their fans. "The only opportunity for fans used to be merch," says Blau, becoming animated as he makes his case. The next opportunity, he says, is what he and Aoki are sure is the hot new thing for music: NFTs, or non-fungible tokens.

The term describes unique items inscribed on a blockchain—most commonly pieces of art, but also other digital artifacts like songs—that can include rights of ownership to those items. In 2021, NFTs became part of the cultural zeitgeist as celebrities plunked down millions to collect digital primates known as Bored Apes, and the artist Beeple sold an NFT piece at auction for an eye-popping $69 million.

Today most NFTs are worth a fraction of what they fetched during the earlier mania, and trading volume is down more than 80% from its peak in early 2022. NFTs now often serve as a punch line—a folly that illustrates the worst excesses of crypto, rather than a serious investment. But Aoki and Blau, like a growing number of artists, are convinced that NFTs are a transformational technology, and that the speculative frenzy in 2021 was a precursor to something much bigger.

For Aoki, a Grammy-nominated DJ who is also an author and producer, NFTs offer an expansive new way to connect with fans. By distributing NFTs tied to his work, he can identify the people who are most passionate about the music, and communicate and even collaborate with them through the digital realm known as Web3.

"I never really felt a community like the community I felt in the Web3 space. I never really felt this energy in the real," Aoki says. "[NFTs] allow for things I never thought I'd ever do, like make a song with a fan."

Aoki's latest project involves making music and art with Blau under the banner of PUNX, which the pair describe as an "audiovisual IRL meets metaverse supergroup." The details were under wraps at press time, but the project is based around the duo's CryptoPunk NFTs. Those NFTs, like Bored Apes, are part of a limited collection that is owned by a studio called Yuga Labs but that gives collectors broad latitude to develop intellectual property associated with the brand—by, say, customizing the images' designs.

Blau, meanwhile, is using NFTs to create novel copyright arrangements between musicians and fans. His company, Royal, is a platform where artists can create and sell NFTs that represent partial ownership of a song or album, letting the purchaser collect a portion of the streaming royalties. The

Steve Aoki (right) and Justin Blau (a.k.a. 3LAU) at Aoki's home in Las Vegas.

Royal NFTs typically offer additional perks like early access to new songs or opportunities to meet or chat online with the musician. The artists, meanwhile, get a new way to directly monetize their current work and raise funds for future projects.

$705 MILLION

NFT sales in the 30 days through March 16, 2023 —the highest total since September 2022

○ SOURCE: NONFUNGIBLE.COM

Royal, which has raised $71 million from investors, offers what Blau sees as a fan club for the blockchain era—one that lets musicians interact with the people who love their music best, while tapping into a revenue opportunity that doesn't rely on the middlemen who have shortchanged artists in the past. So far, Royal remains a niche offering: The company says it has 11,000 users who have paid a total of $2.1 million to invest in 39 "drops" on the platform by artists including rapper Nas and Diplo, another top DJ. (Secondary sales have generated another $5.4 million.) Users have earned a total of around $140,000 in royalties. While the numbers are modest, Blau says they amount to an opening act as NFT technology gains a broader footing. "It's just the first inning of NFTs ever. The second inning is going to be wild. Stuff is going to work a lot better," he says.

He may be onto something. Even as NFTs remain a source of ridicule in mainstream culture, other creative types—from actor Seth Green to comic book legend Todd McFarlane—are embracing them as a way to bond with fans. And while the overall market is far from its 2021 highs, NFTs still generated over $700 million in monthly sales in February. The so-called floor price for items in the preeminent Bored Apes collection, meanwhile, was above $100,000 in March. It's hard to shake the impression NFTs are here to stay. Aoki certainly thinks so—and is hoping a mainstream breakthrough is around the corner: "Imagine if Kendrick Lamar makes a song and releases it with the Web3 community? Or Paul McCartney sold one to a Beatles fan?" NFTs, he says, "allow for imagination and intuition to do things on the fly."

THE NATION'S TOP PROFESSIONALS

JOEL SETH ARONSON, RPH

Clinical Pharmacy Specialist (Retired)
Veteran's Affairs Medical Center

Natick, MA

Joel Seth Aronson, RPh, enjoyed a fulfilling career in hospital pharmacy that spanned more than four decades, culminating in his retirement from the Veterans Affairs Medical Center of Providence, Rhode Island, in 2019. Having initially become involved in his profession out of a desire to help others, he went on to serve in various pharmacy settings throughout the course of his career, including at the Boston City Hospital/Boston Medical Center, when during a blizzard in 1978, he had to walk to work from his Revere apartment as there was no above-ground transportation. For this, Mr. Aronson was bestowed with a commendation award.

AUSTIN T. FRAGOMEN JR.

Chairman Emeritus
Fragomen Del Rey Bernsen & Loewy LLP

New York, NY

With more than five decades of experience in immigration, citizenship and international law as an attorney and educator, Mr. Fragomen is a partner and chairman emeritus of Fragomen, Del Rey, Bernsen & Loewy LLP, an immigration law firm. Hailed as one of the best lawyers in the New York Metro Area by New York Media LLC, Mr. Fragomen was previously staff counsel to the U.S. House of Representatives and an adjunct law professor at the New York University School of Law. He is also the author of a series of immigration procedure handbooks.

DR. CARYL J. GUTH

Founder, Anesthesiologist
Center for Integrative Medicine, Wake Forest School of Medicine

Bermuda Run, NC

Dr. Caryl J. Guth found success in the field of anesthesiology for nearly four decades prior to her retirement in 2000, having held the role of department chair at the Mills-Peninsula Hospital System in California. Since then, she has earned distinction as the founder of the Center for Integrative Medicine at Wake Forest School of Medicine. Likewise, she is the namesake of both the Caryl J. Guth Wing of the Haddock Golf House of the Arnold Palmer Golf Complex and the Dr. Caryl J. Guth Women's Basketball Clubhouse at Wake Forest University.

PAMELA S. HALL

Former Chief Executive Officer and Board Chair
Normandeau Associates Inc.

Bedford, NH

Joining Normandeau Associates, Inc., in Bedford, New Hampshire, in 1971, Pamela S. Hall is an environmental consulting executive and scientific leader. In 1988, she became president and CEO and in 2015, she was elected board chair and remained CEO and board chair until 2020 when she transitioned the firm to new leadership; she remains a senior executive. During her career at Normandeau Associates, Ms. Hall shepherded the company from Fortune 500 ownership to a private, 100% (ESOP) employee-owned, women-led business. Additionally, she successfully expanded business with new locations in Falmouth, Massachusetts, Gainesville, Florida, and Stowe and Holtwood, Pennsylvania.

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TERI HELENESE

U.S. Virgin Islands Director of State-Federal Relations
Washington Representative
Washington, DC

Formerly of Deloitte, Teri Helenese is credited with the success of the Transportation Worker Identification Credential (TWIC) program of the TSA, which transformed the lives of two million maritime workers by introducing biometric smartcards to secure the nation's ports. Ms. Helenese was previously the HR director for Diageo's Captain Morgan Rum Distillery on St. Croix and hired and trained Virgin Islanders, which comprised 97% of the staff. She is the director of state-federal relations and the Washington representative, leading Governor Albert Bryan's Washington, DC, team, which secured approximately $1.2 billion for the USVI in direct aid through programs, including the American Rescue Plan Act.

MELISSA G. HELTON

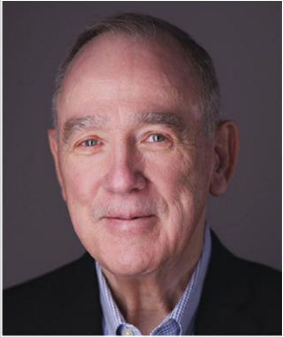
President, General Manager
FanDuel Sportsbook and Horse Racing
Collinsville, IL

Supported by more than 20 years of experience in recreation and gaming services, Ms. Helton serves as the president and general manager of FanDuel Sportsbook and Horse Racing. In her leadership positions, she is proud to have played an instrumental role in changing company culture and fostering an atmosphere of open communication among her employees and to have distinguished herself as a woman in a male-dominated industry. Likewise gratified to have been primarily self-driven throughout the course of her career, Ms. Helton aspires to continue breaking new ground in her field and expand upon the scope of her current endeavors.

DR. WILLIE JOHNSON JR.

District Two Supervisor
Milwaukee County Board of Supervisors
Milwaukee, WI

Driven by a powerful sense of civic activism, Dr. Johnson has distinguished himself for more than three decades in government service. In this capacity, he sits on the Milwaukee County Board of Supervisors as the representative of the second district, through which he serves on behalf of more than 52,000 constituents. Having found success as a social worker and chair of Milwaukee County's Disadvantaged Business Enterprise Committee, Dr. Johnson strives to present himself as someone with whom voters can have a conversation and as a stalwart advocate for minority business development, women's entrepreneurship and a free, equitable society for all.



JOSEPH C. NETTEMEYER JR.

Executive Chairman, Chief Executive Officer
Valin Corporation
Scottsdale, AZ

With almost five decades of experience to his credit in the field of industrial automation, Joseph C. Nettemeyer Jr., has distinguished himself as the chief executive officer of the Valin Corporation, a leading provider of technological solutions for the energy, life sciences, natural resource and transportation industries. In recognition of his accomplishments, Mr. Nettemeyer was named the Silicon Valley Chamber of Commerce Businessman of the Year in 2015. Additionally, he is proud to have contributed much of his time to charitable boards, including with Partners In Sustainable Development International, which has sought to aid those in need in Bangladesh.

TIME WELL SPENT

PASSIONS

TRAVEL

Flying Private-ish

It's not quite your own private jet. But once you indulge in the luxe aviation experience this new crop of companies is offering, you may never want to fly commercial again.

BY ADAM ERACE

▶ **DURING A** shareholder imbroglio in season three of the HBO show *Succession,* interim Waystar Royco CEO Gerri Kellman drops the hammer on the assembled members of the Roy family: "They want to take away the private jets."

The petulant youngest son, Roman Roy, reacts like he's just been told he has to fly basic economy on Spirit: "The PJs? No."

Succession plays the moment for satirical chuckles, but Roman's horror speaks a universal truth: Flying commercial can be a dreadful, dehumanizing experience, even in the front of the plane. First class won't protect you from airport chaos, a psychologically ravaged crew, a broken tray table, or a seatmate with bare feet.

Alex Wilcox says he gets it. That's why he cofounded an alternative: JSX, a Dallas-based air carrier with a fleet of 37 (and growing) 30-seat Embraer 145 jets serving 22 (and growing) destinations. "I hate that everybody hates to fly now because [the airline

COURTESY OF JSX

JSX
N263JX
1

They might not be pouring Dom Pérignon, but PJ-lite operators do deliver on the ultimate luxury of flying private: time.

CHAMPAGNE?

[**1**] JSX's Embraer 145 jets serve 22 destinations, with more to come. [**2**] Aman Jet Expeditions carries just 16 guests in a retrofitted Airbus that most airlines would pack with 100 passengers.

COURTESY OF AMAN

industry] has made it such a miserable experience," says Wilcox, an industry veteran who was a founding executive at JetBlue. "It's lowest-common-denominator, cost-driven, and it doesn't have to be that way."

JSX is one of several players, including Aero, XO, and Blade, in this ascendant aviation space. Call it public charter, flying club, semiprivate, private-ish—it's not how the Roys fly, but it's certainly not commercial, boasting many of the benefits of a private jet, at a more attainable price. Fares on JSX range from $199 to $1,299 one-way, making a "PJ" an attainable luxury for many business-class customers. For a flight from Dallas to Cabo in May 2023, for example, nonstops started at $649 on JSX and $529 in American business. It prompts the question: Why fly commercial? I suppose if you have a soft spot for scalding-outside/frozen-inside frittatas and glitchy internet, you might take AA. Give me JSX's snack basket and rapid gate-to-gate Starlink Wi-Fi any day.

PJ-lite operators aren't all pouring Dom Pérignon or giving away Bulgari goody bags like some international airlines do for premium-cabin passengers, but they do deliver on the ultimate luxury of flying private: extra time.

For my Dallas-to-Cabo flight, I arrived at JSX's private terminal on the back side of Love Field 40 minutes prior to departure. (For domestic flights you have to show up only 20 minutes before takeoff.) There was a five-minute line to check passports and drop luggage; then, after a complimentary cappuccino in the spacious, simply furnished lounge, we were ready to board.

My wife and I passed through streamlined security and walked across the tarmac to our jet, gleaming white with a red stripe down its nose. Instead of the usual cramped two-to-one layout I'd seen when Embraers are used by commercial airlines as puddle jumpers (with a capacity of 50 passengers, instead of JSX's 30), I found a softly lit cabin with ample headspace. One comfortably cushioned shark-gray leather seat sat on either side of the aisle, with tidy cocktail tables. We took off 10 minutes after boarding.

Private jet companies saw a major pandemic-era spike, with the ability to socially distance more effectively drawing customers who were

ON TOP OF THE WORLD Fleet Clubs will offer a plush journey from Miami to the Hamptons or Vail.

COURTESY OF FLEET CLUBS

nervous about boarding a cramped commercial flight, explains Michele Sullivan, founder of Kona Shuttle, a membership-based service connecting Oaklanders and Angelenos to their second homes in Hawaii. “During COVID we had people say, ‘I want to travel but I’m scared,’” she notes. According to the FAA, private aviation in 2021 was up 45.8% from 2020—which more than made up for that first pandemic year’s 21% drop from 2019. And the demand since has only grown: Last year, flight volume climbed another 5.3%, accounting for 5.37 million domestic and international arrivals and departures. Sullivan said even she was surprised by the continued growth at Kona: “We imagined once COVID stopped, [demand] would taper off, and that hasn’t happened.”

This fall, Sullivan will open a Miami-based fly-share, Fleet Clubs, whose 200 members will pay $50,000 annually for 20 roundtrips to the Hamptons or $90,000 to Vail on handsome pine-green Boeing 737s. “These are the top two destinations for Miami,” says Fleet CEO Bernard Schwartz, whose résumé includes stints at Auberge and Four Seasons.

Another way to experience private-ish travel is reminiscent of high-end cruising. Luxury adventurers can see the world via jet-packaged vacations: a 22-day souk-to-safari Africa itinerary with Abercrombie & Kent (starting at $134,500 per person), for example, or maybe the Himalayas (for about $99,000) with Aman Jet Expeditions, which has retrofitted an Airbus that usually carries over 100 for just 16 guests. “Usually, you think of the time on the plane as lost time,” says Catherine Heald, cofounder and CEO of Remote Lands, which manages Aman Jet Expeditions. “But when you’re on our Airbus, everybody’s happy to get back on, like, ‘Oooh, we’re back!’” While calling at destinations such as Kyoto, Palawan, and Marrakech, the Aman Airbus cocoons its guests in buttercream leather, rosé bubbles, and lemongrass-coconut crème caramel.

There are some downsides to flying semiprivate. Environmentally, fewer passengers on board mean a greater carbon footprint per person. And there’s a higher rate of accidents in private flying versus commercial, according to the National Transportation Safety Board (though the data does not segregate hobbyist pilots from the professional ones).

Flight routes for this kind of service are limited, and private-ish airlines are subject to the same ferocious demand for seats as major carriers. For membership-based services, applications tend to operate on personal referrals and involve background checks. “You can’t just be anyone and buy a seat,” says Schwartz.

Luckily for me, JSX takes a more democratic approach: I could book online as I would a flight on any other airline.

Back on my Cabo-bound jet, buoyed by that impeccable internet, I was browsing sample bookings on the JSX app when I looked across the aisle and found my Shiv-Roy-in-training wife on a business call. *You can’t do that on an airplane!* I mouthed in alarm. She shrugged and gestured around as if to say, *We’re on a private jet, Tom.*

Private-ish, to be clear. But honestly, once you’re on board, it’s all a matter of semantics.

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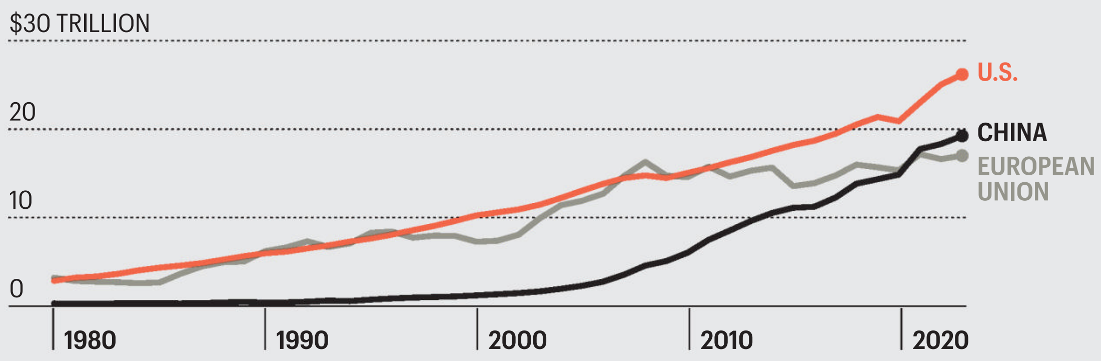
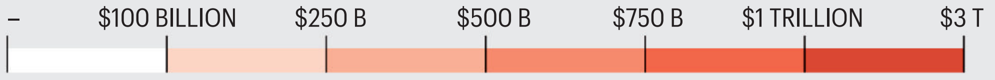
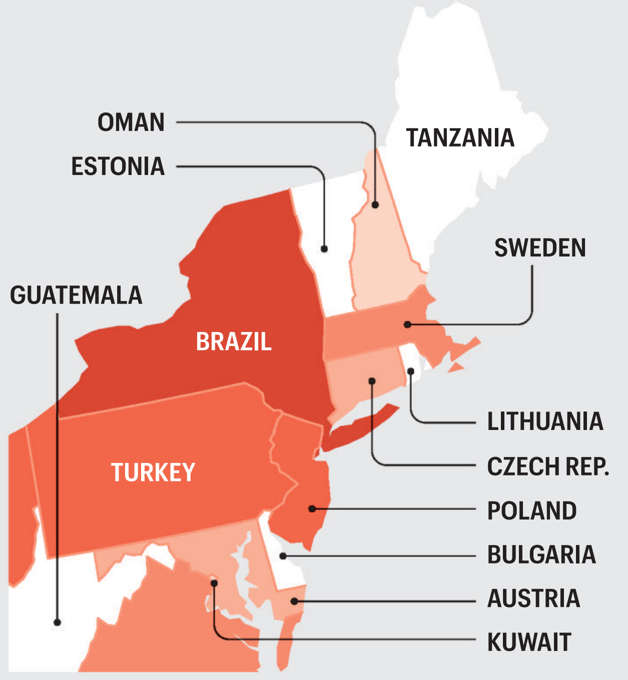
U.S. GDP GROWTH



WORLD GDPs MATCHED TO THOSE OF UNITED STATES

ANNUAL GDP

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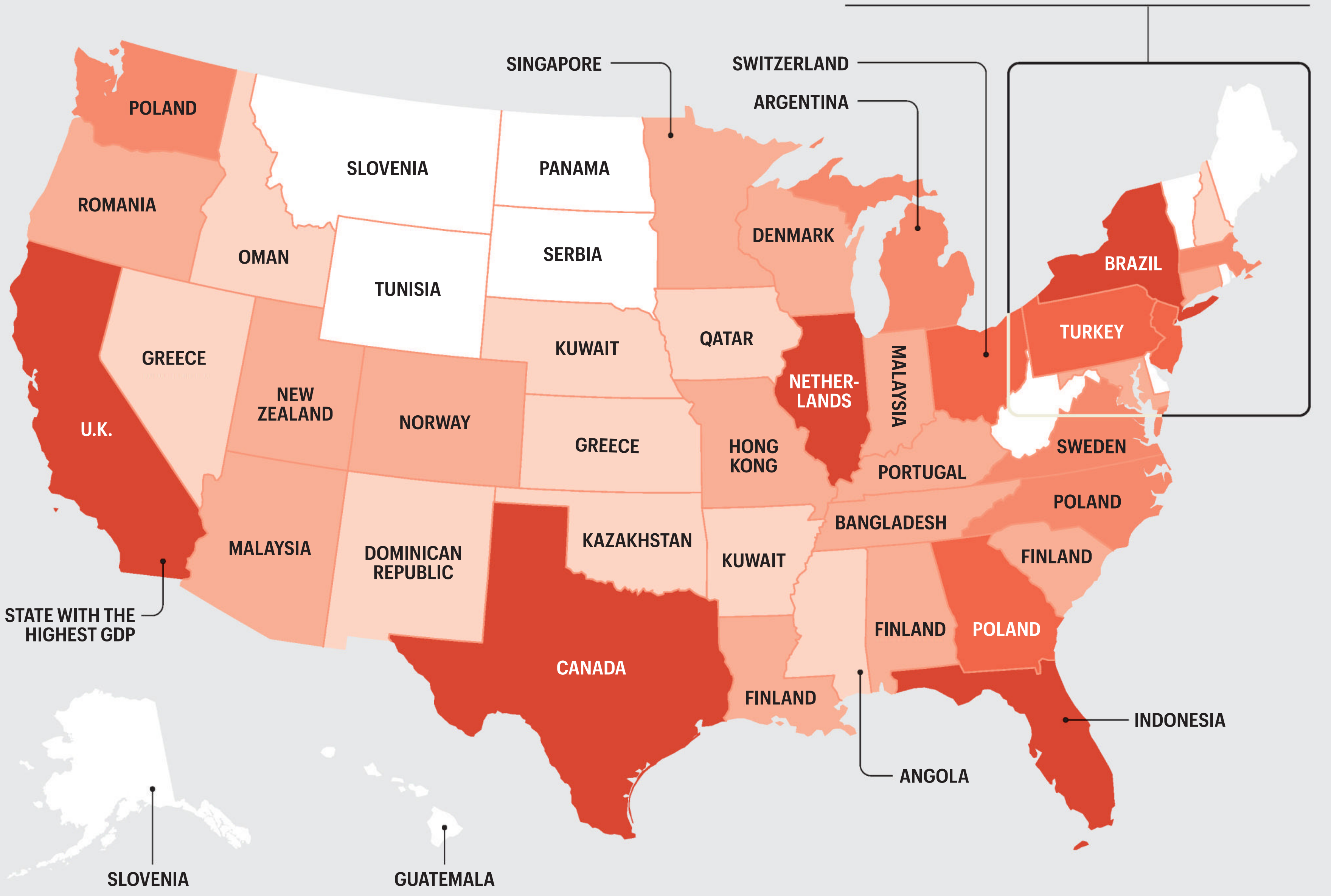
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HOW 50 STATES DRIVE THE GLOBAL ECONOMY

WITH AMERICANS FEELING SHAKY about the domestic economy, it puts things in perspective to remember that the U.S. is still the planet's biggest powerhouse. In 2022, almost 25% of global gross domestic product was generated in the U.S. And each state is a potent piston in that engine. Even the state with the smallest GDP, Vermont, would be one of the world's 100 biggest economies if it were an independent nation; California and Texas, with their multitrillion-dollar economies, would crack the top 10. For this map, *Fortune* labeled each state (and the District of Columbia) with the country that most closely matches it in GDP. It's noteworthy that the highest-GDP states are also home to multiple Fortune 500 companies: Those giants' global revenues are boosting local growth. **—MATT HEIMER**

INFOGRAPHIC BY
NICOLAS RAPP

NOTE: ANNUAL GDP BASED ON Q3 2022 FOR THE U.S. AND 2023 ESTIMATES FOR ALL OTHER COUNTRIES

SOURCES: U.S. BUREAU OF ECONOMIC ANALYSIS; INTERNATIONAL MONETARY FUND

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